May 1976 Number 381-Part I

Solar-Geophysical Data prompt reports

Data for April 1976–March 1976

Explanation of Data Reports Issued as Number 378 (Supplement) February 1976

ERRATA PAGE 5

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Solar - Geophysical Data

NO. 381 MAY 1976

Part I (Prompt Reports)

DATA FOR
APRIL 1976
MARCH 1976

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

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SOLAR - GEOPHYSICAL DATA

No. 381

Issued in two parts

Hope I. Leighton, Editor

J. Virginia Lincoln, Director
Solar - Terrestrial Data Services Division

CONTENTS

Part I (Prompt Reports)

	Page
Index for 1975 and 1976	2
Data for April 1976	3-25
Data for March 1976	27-129

Part II (Comprehensive Reports)

Index for 1975 and 1976	2
Data for November 1975	3-25
Data for October 1975	27-36
Miscellaneous Data	37-48

Energetic Solar Particles and Plasma -- IMP 7 and 8 - September 1975
Cosmic Rays -- Calgary and Sulphur Mountain - February 1976
Solar Radio Spectral Observations (Addenda) - February 1976
Reduced Magnetograms - October 1975

INDEX FOR 1975 - 1976 DATA PUBLISHED IN "SOLAR-GEOPHYSICAL DATA"

		1975 Aug	Sep	Oct	Nov	Dec	1976 Jan	Feb	Mar	Apr
A.	Solar and Interplanetary Phenomena									
A.1	Sunspot Drawings	374A 28	375A 24	376A 28	377A 26	378A 28	379A 26	380A 36	381A 30	
A.2a	Zürich Provisional Relative Sunspot Numbers R_z	373A 7	374A 7	375A 7	376A 7	377A 7	378A 7	379A 7	380A 7	381A 7
A.2b	Zürich Final Sunspot Numbers R_z	378A 6	378A 6	378A 6	378A 6	378A 6				
A.2c	American Relative Sunspot Numbers R_A'	373A 7	374A 7	375A 7	376A 7	377A 7	378A 7	379A 7	380A 7	381A 7
A.3a	Mt. Wilson Magnetograms	374A 28	375A 24	376A 28	377A 26	378A 28	379A 26	380A 36	381A 30	
A.3b	Mt. Wilson Magnetic Characteristics of Sunspots	374A 90	375A 84	376A 90	377A 86	378A 90	379A 88	380A 94	381A 92	
A.3c	Kitt Peak Magnetograms	374A 28	375A 24	376A 28	377A 26	378A 28	379A 26	380A 36	381A 30	
A.4	Hα Spectroheliograms	374A 28	375A 24	376A 28	377A 26	378A 28	379A 26	380A 36	381A 30	
A.5	Calcium Plage Drawings - McMath (or Catania)	374A 28	375A 24	376A 28	377A 26	378A 28	379A 26	380A 36	381A 30	
A.5a	Calcium Plage (McMath) and Sunspot Regions	374A 90	375A 84	376A 90	377A 86	378A 90	379A 88	380A 94	381A 92	
A.5b	McMath Daily Calcium Plage Indices	374A 95	375A 90	376A 96	377A 92	378A 94	379A 93	380A100	381A 97	
A.6	Hα Synoptic Charts	379B 14	380B 12	376A 27	377A 25	378A 27	379A 25	380A 33	381A 29	
A.7b	Coronal Line Emission	374A 28	375A 24	376A 28	377A 26	378A 28	379A 26	380A 36	381A 30	
A.7f	Helium D3 Chromosphere (Big Bear)	---	---	---	---	---	378A 23	379A 21	380A 30	381A 24
A.8aa	2800 MHz - Daily Values of Solar Flux (ARO-Ottawa)	373A 7	374A 7	375A 7	376A 7	377A 7	378A 7	379A 7	380A 7	381A 7
A.8ac	2800 MHz - Daily Values of Adj. Solar Flux (ARO-Ottawa)	373A 7	374A 7	375A 7	376A 7	377A 7	378A 7	379A 7	380A 7	381A 7
A.8g	Daily Values of Adjusted Solar Flux (AFGL)	373A 7	374A 7	375A 7	376A 7	377A 7	378A 7	379A 7	380A 7	381A 7
A.9cb	8.6 mm Radio Maps of the Sun (NELC - La Posta)	374A 28	375A 24	376A 28	377A 26	378A 28	379A 26	380A 36	381A 30	
A.9d	2 cm Radio Maps of the Sun (NELC- La Posta)	374A 28	375A 24	376A 28	377A 26	378A 28	379A 26	380A 36	381A 30	
A.10a	169 MHz - Interferometric Observations (Nancay)	373A 15	374A 12	375A 12	376A 14	377A 12	378A 13	379A 12	380A 15	381A 13
A.10c	21 cm East-West Solar Scans (Fleurs)	373A 17	374A 14	375A 14	376A 16	378B 57	378A 15	379A 14	380A 17	381A 15
A.10d	43 cm East-West Solar Scans (Fleurs)	373A 18	374A 15	375A 15	376A 17	378B 58	378A 16	379A 15	380A 18	381A 16
A.10e	10.7 cm East-West Solar Scans (Ottawa-ARO)	373A 16	374A 13	375A 13	376A 15	377A 13	378A 14	379A 13	380A 16	381A 14
A.11g	Solar X-ray (SMS/GOES)	373A 25	374A 20	375A 18	376A 21	377A 19	378A 20	379A 19	380A 26	381A 21
A.11h	Solar X-ray (OSO-8; 1975-057A)	374A 28	375A 24	376A 28	377A 26	378A 28	379A 26	380A 36	381A 30	
A.11ib	Solar EUV Spectroheliograms FeXV 384Å (AURA D2-B)	---	---	---	---	---	---	380A 36	381A 30	
A.12ba	Cosmic Ray Protons (Pioneers 6 & 7)	---	374A 18	---	---	377A 18	---	---	---	---
A.12bb	Cosmic Ray Protons (Pioneers 8 & 9)	---	374A 19	---	---	---	---	---	---	---
A.12e	Energetic Solar Particles (IMP H & J)	380B 23	381B 39							
A.13a	Solar Wind (Pioneers 6 & 7)	---	374A 18	---	---	377A 18	378A 19	379A 18	---	---
A.13d	Solar Wind from IPS Measurements	373A 24	374A 17	375A 17	376A 20	377A 17	378A 18	380A123	380A 25	381A 20
A.13e	Solar Plasma (IMP H & J)	380B 22	381B 38							
A.17	Interplanetary Magnetic Field (Pioneer 8)	---	374A 19	---	---	---	---	---	---	---
A.17	Interplanetary Magnetic Field (Pioneer 9)	---	374A 19	---	---	---	---	---	---	---
A.17c	Inferred IP Magnetic Field	373A 29	374A 23	375A 20	376A 24	377A 21	378A 24	379A 22	380A 31	381A 25
A.18	Interplanetary Electric Field (Pioneer 8)	---	374A 19	---	---	---	---	---	---	---
A.18	Interplanetary Electric Field (Pioneer 9)	---	374A 19	---	---	---	---	---	---	---
B.	Ionospheric (and Radio Wave Propagation) Phenomena									
B.51ca	High Latitude Quality Figures and Forecasts	374A115	375A103	376A113	377A111	378A114	379A115	380A119	381A126	
B.52	Graphs of Transmission Frequency Range	374A116	375A104	376A114	377A112	378A115	379A116	380A120	381A127	
B.53	Quality Figures Based on Frequency Ranges	374A118	375A106	376A116	377A114	378A117	379A118	380A122	381A129	
C.	Flare-Associated Events									
C.1a	Optical Observations Flares	373A 10	374A 20	375A 10	376A 10	377A 10	378A 10	379A 10	380A 10	381A 10
C.1ba	Optical Observations Flares (Standardized Data)	378B 4	379B 4	380B 4	381B 4					
C.1d	Flare Patrol Observations	373A 14	374A 11	375A 11	376A 13	377A 11	378A 12	379A 11	380A 14	381A 12
C.1d	Flare Patrol Observations	378B 25	379B 8	380B 7	381B 13					
C.1e	Flare Indices (by day)	378B 24	379B 7	380B 6	381B 12					
C.1f	Flare Indices (by Region)	379B 22	380B 20	381B 36						
C.3	Solar Radio Waves - Outstanding Occurrences	378B 26	379B 9	380B 8	381B 14					
	Solar Radio Waves - Fixed Frequencies - Selected	373A 19	374A 16	375A 16	376A 18	377A 16	378A 17	379A 16	380A 19	381A 17
C.3t	43.25, 80 and 160 MHz Selected Bursts (Culgoora)	374A107	376B 26	376A105	377A102	378A101	379A102	380A106	381A114	
C.4a	Solar Radio Spectral Obs. (Fort Davis)	374A 99	375A 92	376A 98	377A 94	378A 96	379A 95	380A102	381A100	
C.4b	Solar Radio Spectral Obs. (Boulder)	374A 99	375A 92	376A 98	377A 94	378A 96	379A 95	380A102	381A100	
C.4d	Solar Radio Spectral Obs. (Culgoora)	378B 54	376B 24	376A 98	377A 94	378A 96	379A 95	380A102	381A100	
C.4e	Solar Radio Spectral Obs. (Weissenau)	374A 99	375A 92	376A 98	377A 94	378A 96	379A 95	380A102	381A100	
C.4f	Solar Radio Spectral Obs. (Sagamore Hill)	374A 99	375A 92	376A 98	377A 94	378A 96	379A 95	381B 45	381A100	
C.4h	Solar Radio Spectral Obs. (Dwingeloo)	---	---	376A 98	---	---	379A 95	---	381A100	
C.4i	Solar Radio Spectral Obs. (Dürnten)	374A 99	375A 92	376A 98	377A 94	378A 96	379A 95	380A102	381A100	
C.4j	Solar Radio Spectral Obs. (Manila)	374A 99	375A 92	376A 98	377A 94	378A 96	379A 95	381B 45	381A100	
C.5e	Solar X-ray (SMS/GOES)	373A 27	374A 22	375A 18	376A 23	377A 23	378A 22	---	380A 28	381A 23
C.6	Sudden Ionospheric Disturbances	374A 96	375A 91	376A 97	377A 93	378A 95	379A 94	380A101	381A 98	
D.	Geomagnetic and Magnetospheric Phenomena									
D.1a	Geomagnetic Indices Kp, Kn, Ks, Km, Ap, aa, Cp	374A110	374A 98	376A108	377A105	378A105	379A108	380A112	381A119	
D.1ba	27-day Chart of Kp Indices	374A111	374A 99	376A109	377A106	378A107	379A109	380A114	381A121	
D.1c	27-Day Chart of C9	378A108	378A108	378A108	378A108	378A108				
D.1d	Principal Magnetic Storms	374A113	374A101	376A111	377A108	378A112	379A113	380A117	381A124	
D.1e	Reduced Magnetograms	---	---	381B 47						
D.1f	Sudden Commencement and Solar Flare Effects	374A114	374A102	376A112	377A110	378A113	379A114	380A118	381A125	
D.1g	Equatorial Indices Dst	374A112	374A100	376A110	377A107	378A111	379A112	380A116	381A123	
F.	Cosmic Rays									
F.1a	Cosmic Ray Neutron Counts (Deep River)	374A108	375A 96	377B 34	377A103	378A104	379A103	380A107	381A118	
F.1b	Cosmic Ray Neutron Counts (Climax)	374A108	375A 96	376A106	377A103	378A104	379A103	380A107	381A118	
F.1e	Cosmic Ray Neutron Counts (Alert)	374A108	375A 96	377B 34	377A103	378A104	379A103	380A107	381A118	
F.1f	Cosmic Ray Neutron Counts (Calgary)	374A108	375A 96	376A106	377A103	378A104	380B 28	381B 44	381A118	
F.1g	Cosmic Ray Neutron Counts (Sulphur Mountain)	374A108	375A 96	376A106	377A103	378A104	380B 28	381B 44	381A118	
F.1h	Cosmic Ray Neutron Counts (Thule)	374A108	375A 96	376A106	377A103	378A104	379A103	380A107	381A118	
F.1i	Cosmic Ray Neutron Counts (Kiel)	374A108	375A 96	376A106	377A103	378A104	379A103	380A107	381A118	
F.1j	Cosmic Ray Neutron Counts (Tokyo)	374A108	375A 96	376A106	377A103	378A104	379A103	380A107	381A118	
H.	Miscellaneous									
H.60	IUWDS Alert Decisions	373A 4	374A 4	375A 5	376A 5	377A 5	378A 5	379A 5	380A 4	381A 4
H.62	Abbreviated Calendar Record	379B 15	380B 13	381B 29						

Note: A = Part I, B = Part II.

374A 28 listed under 1975 Aug shows that data for August 1975 were contained in *Solar-Geophysical Data* Number 374 - Part I beginning on page 28.

APRIL 1976 DATA

Contents

	Page
Alert Period	
IUWDS Alert Periods (Advance and Worldwide)	4-5
Daily Solar Indices	
12-Month Tables Sunspot Numbers, R_Z, and 2800 MHz Flux Adjusted to 1 A.U.	6
Combined Table Sunspot Numbers and Solar Fluxes	7
Graph of Sunspot Cycles	8
Zürich Smoothed Observed and Predicted Sunspot Numbers	9
Solar Flares	
Hα Solar Flares	10-11
No-Flare-Patrol Chart	12
Solar Radio Waves	
169 MHz Solar Interferometric Chart - Nançay	13
10.7 cm East-West Solar Scans - ARO, Ottawa	14
21 cm East-West Solar Scans - Fleurs	15
43 cm East-West Solar Scans - Fleurs	16
Selected Fixed-Frequency Occurrences	17-18
Selected Solar Radio Burst	19
Solar Wind Measurements	
Scintillation Observations	20
Spacecraft Observations	
(No observations)	
Solar X-ray Radiation	
SMS-2 GOES	21-23
Coronal Holes	
Helium D3 Chromosphere	24
Inferred IP Magnetic Field Polarities	25
Solar Proton Event (Provisional)	unnumbered

ALERT PERIODS

INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

APRIL 1976

PRESTO MESSAGES (THE RAPID REPORT OF MAJOR EVENTS)

BOULDER 01/0515Z WEAK MAGSTORM IN PROGRESS 01/0245Z. AURORA OBSERVED IN BOULDER.
BOULDER 30/2054Z TENFLARE 1750 FLUX UNITS 30/2054Z IN PROGRESS.
BOULDER 30/2152Z SOFLARE 2B S09W46 30/2050Z IN PROGRESS.
BOULDER 30/2225Z COSMIC RAY INCREASE 30/2222Z 5-6 PERCENT.

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of observation	Wolf number	10 cm solar flux	A index	Active Regions				Outstanding events	Forecasts			Alert Situatuations
						Location Lat-Long	No. of Flares Total	M	X		Date	Location Lat-Long	Desc*	
092	01	31	29	83	08	S08W11	0	0	0		01	S08W11	E	SOLALERT 01/XX MAGALERT 01/XX STRATWARM ALERT /THURSDAY/ STRATWARM EXISTS. STRATOSPHERIC VORTEX SPLIT. WARM SIBERIAN CYCLONE FILLING. WARM RIDGE OVER POLAR REGION.
093	02	01	62	80	80	S08W27	0	0	0		02	S08W27	E	SOLALERT 02/XX MAGALERT 02/05 STRATWARM ALERT /FRIDAY/ STRATWARM EXISTS. MID-STRATOSPHERIC ANTICYCLONE MOVING FROM ALASKA TOWARD SIBERIAN ARTIC. WARM RIDGE OVER POLAR REGION.
094	03	02	28	77	16	S08W38	0	0	0		03	S08W38	Q	SOLNIL MAGALERT 03/05 MINOR STRATWARM ALERT /SATURDAY/ WARM ANTICYCLONE DOMINATING MIDDLE AND UPPER STRATOSPHERE POLAR CIRCULATION. SHORT DURATION RETURN TO WESTERLIES POSSIBLE BEFORE FINAL SPRINGTIME STRATOSPHERIC EASTERLY CIRCULATION ESTABLISHED IN NEXT FEW WEEKS. STRATWARM ENDS.
095	04	03	19	77	20	S08W52	1	0	0		04	S08W52	Q	SOLQUIET MAGALERT MINOR 04/05
096	05	04	26	75	23	S08W66	1	0	0		05	S08W66	Q	SOLQUIET MAGALERT MINOR 05/07
097	06	05	16	73	20	S08W79	1	0	0		06	S08W79	Q	SOLQUIET MAGALERT MINOR 06/08
098	07	06	11	71	19	S08W94	1	0	0		07	S08W94	Q	SOLQUIET MAGALERT MINOR 07/08
099	08	07	00	70	20	-	-				08	SPOTNIL		SOLQUIET MAGALERT MINOR 08/09
100	09	08	11	72	14	N05E78	0	0	0		09	N05E78	Q	SOLQUIET MAGNIL
101	10	09	11	74	10	N04E64	0	0	0		10	N04E64	Q	SOLQUIET MAGQUIET
102	11	10	11	75	12	N04E50	0	0	0		11	N04E50	Q	SOLQUIET MAGQUIET
103	12	11	37	77	08	N04E37 N02E34 N07E35	0 0 0	0 0 0	0 0 0		12	N04E37 N02E34 N07E35	Q Q Q	SOLQUIET MAGQUIET
104	13	12	33	78	11	N03E24 N02E19	0 0	0 0	0 0		13	N03E24 N02E19	Q Q	SOLQUIET MAGQUIET
105	14	13	62	79	12	N03E08 N02E03 N07E06 N06E14	0 0 0 0	0 0 0 0	0 0 0 0		14	N03E08 N02E03 N07E06 N06E14	Q Q Q Q	SOLQUIET MAGQUIET
106	15	14	48	79	12	N02W08 N03W03 N08W01 N07E65	0 0 0 0	0 0 0 0	0 0 0 0		15	N02W08 N03W03 N08W01 N07E65	Q Q Q Q	SOLQUIET MAGQUIET
107	16	15	28	79	05	N02W17 N04E50	0 0	0 0	0 0		16	N02W17 N04E50	Q Q	SOLQUIET MAGQUIET
108	17	16	22	80	07	N02W28 N04E39	0 0	0 0	0 0		17	N02W28 N04E39	Q Q	SOLQUIET MAGQUIET
109	18	17	35	80	06	N03W42 N05E28 S09E44	0 0 0	0 0 0	0 0 0		18	N03W42 N05E28 S09E44	Q Q Q	SOLQUIET MAGQUIET
110	19	18	38	80	02	N03W56 N06E11 S08E26	1 0 0	0 0 0	0 0 0		19	N03W56 N06E11 S08E26	Q Q Q	SOLQUIET MAGQUIET
111	20	19	47	79	05	N03W68 N06W01 S10E12	1 0 0	0 0 0	0 0 0		20	N03W68 N06W01 S10E12	Q Q Q	SOLQUIET MAGQUIET
112	21	20	55	79	05	N03W86 N05W14 S09W01 S06W47	3 0 0 0	0 0 0 0	0 0 0 0		21	N03W86 N05W14 S09W01 S06W47	Q Q Q Q	SOLQUIET MAGALERT 22/24
113	22	21	34	76	06	S09E70 N05W27 S10W11	0 1 0	0 0 0	0 0 0		22	S09E70 N05W27 S10W11	Q Q Q	SOLQUIET MAGALERT 22/24
114	23	22	24	77	16	N05W41 S09E56 S10W25	1 0 1	0 0 0	0 0 0		23	N05W41 S09E56 S10W25	Q Q Q	SOLQUIET MAGALERT 23/24
115	24	23	25	75	08	N05E54 S09E44	0 0	0 0	0 0		24	N05E54 S09E44	Q Q	SOLQUIET MAGNIL

ALERT PERIODS

INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

APRIL 1976

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of obser-vation	Wolf number	10 cm solar flux	A index	Active Regions				Outstanding events	Forecasts			Alert Situatuations
						Location Lat-Long	No. of Flares Total	M	X		Date	Location Lat-Long	Desc*	
116	25	24	35	76	12	N05W65 S09E32 S07W61	0 0 0	0 0 0	0 0 0		25	N05W65 S09E32 S07W61	Q Q Q	SOLQUIET MAGQUIET
117	26	25	33	75	10	N05W79 S09E18 N04E62	0 1 0	0 0 0	0 0 0		26	N05W79 S09E18 N04E62	Q Q Q	SOLQUIET MAGQUIET
118	27	26	28	75	07	S09E05 N05E85	0 0	0 0	0 0		27	S09E05 N05E85	Q Q	SOLQUIET MAGQUIET
119	28	27	33	74	11	S07W07 N05E35	0 0	0 0	0 0		28	S07W07 N05E35	Q Q	SOLQUIET MAGALERT 28/29
120	29	28	28	72	11	S09W20 N03E20	1 1	0 0	0 0		29	S09W20 N03E20	Q Q	SOLQUIET MAGALERT 28/29
121	30	29	18	79	12	S09W35	2	1	0		30	S09W35	Q	SOLQUIET MAGALERT 29/04
122	01	30	70	80	11	S09W46 N05W01	8 0	0 0	1 0	2B FLARE S09W46 30/2050Z, FLARE WAS TENFLARE 1750 FLUX UNITS. COSMIC RAY IN-CREASE 5-6 PERCENT.	01	S09W46 N05W01	A Q	SOLALERT 01/03 MAGALERT 01/04

Errata: The "stratwarms" published in March (379 - Part I) with the Alert Periods for February 1976 were listed on the wrong days. The one listed on the 9th was for the 10th. The one on the 12th was for the 13th. Move the one on the 27th to the 28th and the one on the 29th to the 1st of March.

RELATIVE SUNSPOT NUMBERS

ZURICH, R_z

	1975 FINAL								1976 PROVISIONAL			
DAY	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	26	7	23	37	14	15	0	7	0	0	0	26
2	33	11	18	36	16	8	0	23	0	0	0	25
3	34	9	22	46	19	9	7	20	0	0	0	22
4	32	7	16	78	29	10	18	23	0	0	0	13
5	30	7	23	93	25	8	22	21	0	0	0	12
6	20	7	33	104	24	10	27	18	0	0	10	9
7	14	0	23	102	24	9	30	20	0	0	12	0
8	0	0	19	89	23	16	33	18	0	0	7	0
9	0	0	16	83	17	15	30	8	0	0	10	8
10	8	0	23	80	10	8	26	0	0	0	12	10
11	0	9	29	72	10	8	30	0	0	0	13	15
12	0	0	33	45	16	10	24	0	20	0	13	17
13	0	0	43	52	19	21	22	0	26	13	13	17
14	7	0	46	34	17	26	29	7	36	16	22	19
15	7	8	43	31	8	21	23	7	20	18	16	19
16	8	19	39	28	14	18	28	7	22	11	11	19
17	0	17	25	19	14	16	30	9	24	8	30	24
18	8	12	32	16	18	16	33	8	20	15	45	27
19	0	15	36	8	13	15	36	7	18	10	51	27
20	0	0	28	22	30	10	35	0	16	12	51	30
21	0	7	30	23	27	7	31	0	11	8	48	39
22	8	0	27	7	23	0	23	0	10	7	36	20
23	8	12	19	14	0	0	12	0	10	0	28	17
24	7	20	30	8	0	7	11	18	0	7	25	16
25	0	24	33	11	0	0	9	14	0	0	22	17
26	0	33	30	16	0	0	7	8	0	0	42	28
27	7	38	29	18	0	0	0	0	7	7	46	23
28	13	36	26	10	0	0	0	0	0	0	50	21
29	0	23	20	10	0	0	0	0	14	0	42	26
30	0	22	27	21	7	0	0	0	8		32	38
31	8		34	21		0		0	0		27	
MEAN	9.0	11.4	28.2	39.7	13.9	9.1	13.4	7.8	8.5	4.6	23.0	19.5

1975 yearly mean = 15.5

DAILY SOLAR FLUX AT 2800 MHz
OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S_a

	1975								1976			
DAY	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	76.3	71.4	78.7	91.6	87.0	76.4	73.4	72.1	72.1	68.6	67.7	79.6
2	81.1	73.0	76.8	95.4	87.9	75.1	71.4	74.8	71.2	68.6	68.1	76.8
3	79.6	70.8	77.1*	97.0*	87.8	78.4	73.0	74.3	71.3	68.4	67.4	76.1
4	79.6	70.4	76.8	104.6	92.8	76.3	75.4	74.1	71.3	68.4	67.4	74.7
5	79.4	69.3	76.9	107.9	94.4	76.1	78.9	77.4	71.9	67.6	67.6	73.0
6	75.9	68.2	76.1	120.0*	94.0	75.1	80.1	75.8	71.7	68.1	67.5	71.3
7	73.6	68.1	74.1	123.2	91.1	74.3	80.5	73.7	71.6	69.3	67.9	70.3
8	71.9	67.5	74.0	123.7	88.5	74.0	80.9	76.0	70.9	68.4	67.5	71.9
9	70.6	67.7	73.3	115.9	84.3	75.4	78.8	73.3	69.4	68.3	68.2	74.1
10	70.1	68.8	73.0	116.5	82.5	74.3	78.9	73.3	70.5	68.5	68.4	75.3
11	69.8	68.1	77.6	107.3	81.1	73.3	78.6	74.3	72.1	68.4	68.8	77.1
12	69.6	68.4	82.7	104.5*	78.2*	74.8	79.9	73.4	70.9	67.8	68.9	78.1
13	69.1	67.3	88.5*	98.0	75.2	79.0	79.2	72.8	80.0	69.7	70.9	79.6
14	68.7	68.5	89.0	90.9*	74.2	80.0	82.7	71.8	82.1*	69.9	70.1	79.5
15	68.0	68.9	85.6	86.0	74.1	80.3	83.7	71.8	80.4	69.6	69.1	79.2
16	68.5	71.4	83.6	82.8	74.3	79.5	87.6	70.5	78.1	69.7	72.5	80.6
17	68.3	70.2	81.2	79.0	74.8	78.9	86.9	70.5	76.6	69.9	74.4*	80.5
18	68.7	70.2	82.8	76.4	76.2	79.2	90.8*	69.6	76.7	70.1	79.0	80.5
19	68.9	71.0	81.9	76.7	76.2	78.0	93.0*	69.1	75.2	70.1	81.6*	79.8
20	68.6	72.5	83.3	77.2	76.5	77.1	90.9	69.7	74.6	70.0	85.0	80.0
21	69.7	68.7	83.1	80.0	76.7	75.7	86.6	69.0	72.1	68.8	91.2	78.0
22	70.8	69.9	82.7	78.5	75.3	74.2	81.5	68.9	70.9	68.9	83.0	76.2*
23	70.6	72.9	82.0	76.8	76.1	74.3	77.2	69.6	70.2	69.2	86.9	75.7
24	70.6	75.9	79.3	77.0	76.8	72.7*	74.7	71.4	68.5	69.6	82.2*	76.8
25	70.2	77.7	79.8	80.6	76.7	72.1	73.7	71.0	68.2	68.4	85.1	75.7
26	69.0	79.8	80.0	81.3	76.7	71.9	71.9	71.9	68.2	68.5	84.1*	75.7
27	70.5	81.5	79.5	83.6	75.7	72.1	70.7	72.5	67.2	68.5	85.5	74.6
28	70.6	80.7	76.5	83.3	76.1	71.7	70.4	71.5	67.1	67.9	87.1*	73.4
29	71.0	79.4	75.5	84.7	75.9	70.8	70.9	72.5	67.4	67.4	84.0	79.6
30	71.0	78.8	78.9	86.2	75.8	70.2	70.6	71.9	68.9		82.4	79.5*
31	71.1		81.9*	86.7		69.9		72.1	69.1		82.7	
MEAN	71.6	71.9	79.7	92.7	80.4	75.3	79.1	72.3	72.4	68.8	75.8	76.7

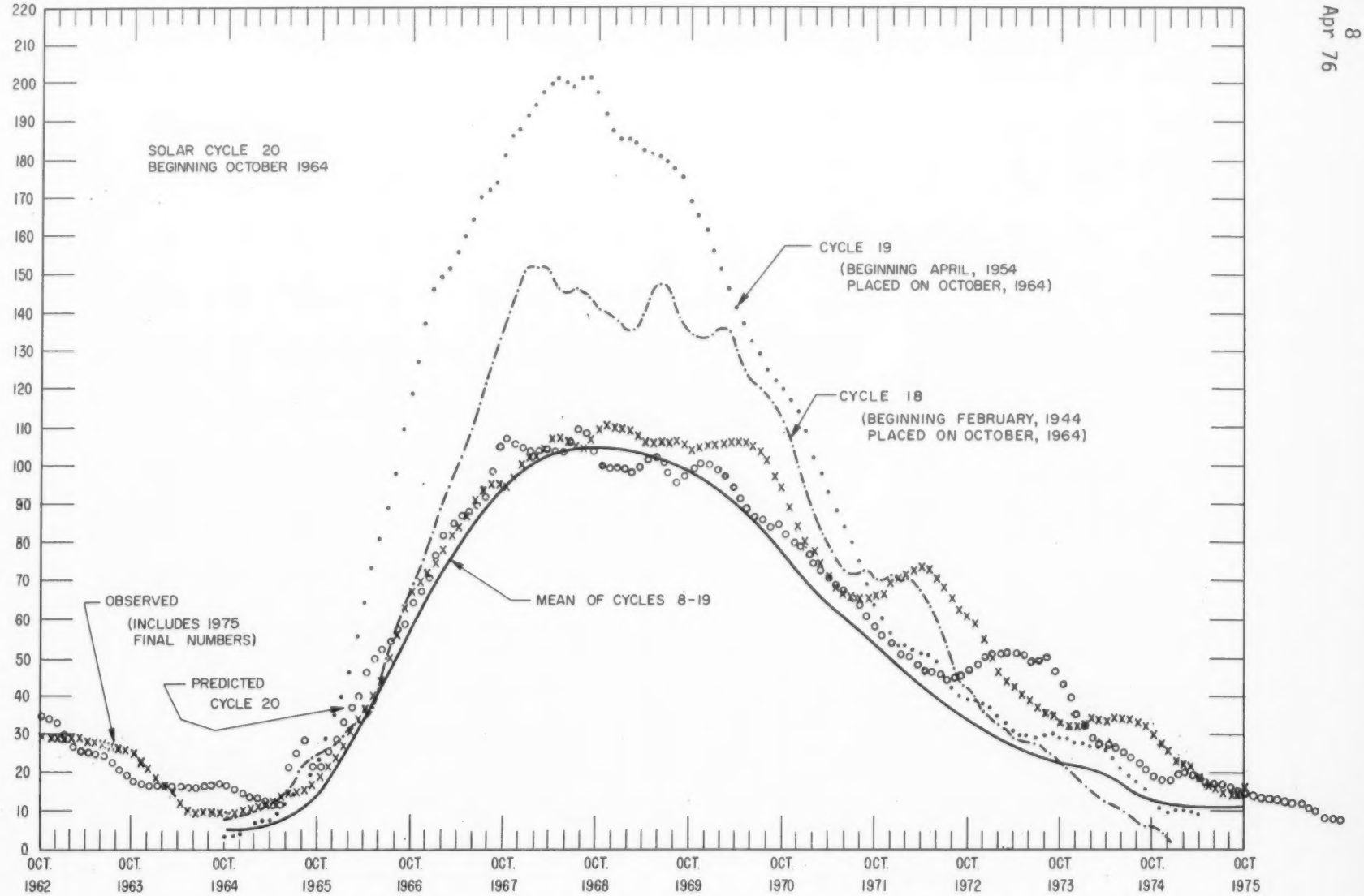
* adjusted for burst

DAILY SOLAR INDICES

APRIL 1976

APR 1976	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	SUNSPOT NUMBERS		OBSERVED FLUX	SOLAR FLUX ADJUSTED TO 1 A.U.								
			R_Z	$R_{A'}$	OTTAWA 2800	AFGL 15400	AFGL 8800	AFGL 4995	OTTAWA 2800	AFGL 2695	AFGL 1415	AFGL 606	AFGL 410	AFGL 245
1	92	26	26	18	79.7	525	302	133	79.6	79.0	51.4	30.9	23.3	12.2
2	93	27	25	18	76.9	524	294	129	76.8	75.6	49.1	30.1	22.2	9.8
3	94	1	22	17	76.2	527	289	125	76.1	74.8	47.4	28.0	23.1	9.8
4	95	2	13	13	74.7		288	125	74.7	74.2	46.8	26.3	21.6	8.8
5	96	3	12	10	73.0		283	123	73.0	72.8	45.5	29.5	20.0	8.1
6	97	4	9	8	71.2	510	278	119	71.3	70.1	44.9	27.7	20.1	8.3
7	98	5	0	0	70.2	534	272	117	70.3	70.6	46.6	29.2	23.6	9.1
8	99	6	0	0	71.7	514	273	118	71.9	72.7	46.8	29.9	20.1	8.0
9	100	7	8	5	73.9	517	274	119	74.1	74.5	48.3	32.1	20.0	7.8
10	101	8	10	10	75.0	506	280	121	75.3	75.0	48.2	32.0	19.9	8.2
11	102	9	15	13	76.8	534	281	128	77.1	80.7	50.9	29.5	20.8	8.0
12	103	10	17	22	77.8	523	282	121	78.1	79.0	51.7	31.0		
13	104	11	17	20	79.2	509	281	124	79.6	79.5	53.0	31.5		
14	105	12	19	16	79.1		282	124	79.5	78.9	53.2	36.3	23.8	8.5
15	106	13	19	15	78.7		280	125	79.2	78.8	54.2	35.1	23.6	8.7
16	107	14	19	15	80.1	511	273	125	80.6	78.8	53.1	35.0	21.3	8.4
17	108	15	24	17	79.9	510	274	125	80.5	78.6	53.3	35.4	20.8	8.2
18	109	16	27	23	79.8	490	277	125	80.5	78.0	50.0	36.1	20.0	8.5
19	110	17	27	24	79.1	508	276	124	79.8	77.4	51.3	36.3	23.0	
20	111	18	30	27	79.3	504	275	124	80.0	77.3	51.6	36.2	22.1	
21	112	19	39	30	77.3	498	280	121	78.0	77.4	50.1	37.0	20.8	10.0
22	113	20	20	19	75.4*	506	281	121	76.2*	77.6	52.8	37.4	23.9	14.3
23	114	21	17	15	74.9	505	270	121	75.7	73.8	50.3	36.2	26.3	8.7
24	115	22	16	15	75.9	501	278	120	76.8	75.9	49.2	34.1	22.1	9.3
25	116	23	17	22	74.9	516	281	119	75.7	76.3	50.7	34.6	19.6	8.3
26	117	24	28	25	74.8		274	119	75.7	74.9	50.4	34.7	20.4	8.3
27	118	25	23	18	73.6	496	275	120	74.6	75.9	49.6	34.1	21.1	7.9
28	119	26	21	21	72.4	489	277	120	73.4	73.9	49.5	35.6	19.8	7.8
29	120	27	26	21	73.5	474	278	126	79.6	77.9	49.2	31.0	21.5	9.4
30	121	1	38	30	78.4*	474	281	129	79.5*	79.9	50.6	36.8	21.7	9.5
MEAN			19.5	16.9	76.2	508	280	123	76.7	76.3	50.0	33.0	21.7	9.0

* Adjusted for burst.



PREDICTED AND OBSERVED SUNSPOT NUMBERS

SMOOTHED OBSERVED AND PREDICTED SUNSPOT NUMBERS
CYCLE 20

MONTH	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	10.2	11.0
1965	11.7	12.0	12.5	13.6	14.6	15.0	15.5	16.4	17.4	19.7	22.3	24.5
1966	27.7	31.3	34.5	37.4	40.7	44.6	50.3	56.6	63.1	67.6	70.2	72.7
1967	75.0	78.0	82.2	84.6	87.4	91.5	94.1	95.3	95.3	95.8	97.1	100.6
1968	102.6	102.9	104.7	107.2	107.6	106.6	105.2	104.0	107.0	109.9	110.6	110.1
1969	110.0	109.6	108.0	106.4	106.2	106.1	105.0	106.4	105.4	104.1	104.6	104.9
1970	105.6	106.0	106.2	106.1	105.0	105.3	103.0	101.0	97.2	93.9	89.4	84.1
1971	80.4	77.0	74.4	70.9	68.1	66.7	65.4	64.6	65.0	66.2	66.0	69.4
1972	70.0	71.2	72.4	73.4	72.9	70.5	68.2	65.5	62.2	61.6	58.7	55.1
1973	50.9	46.5	44.2	42.7	40.7	39.1	37.5	36.1	34.4	32.6	31.0	31.5
1974	32.7	34.4	34.0	33.9	34.6	34.5	34.1	33.1	32.1	30.2	27.5	25.2
1975	23.0	22.1	21.3	18.6	16.0	16.0	15.0	14.3	14.5	15.6	14.6 (--)	13.3 (--)
1976	12.2 (--)	11.3 (--)	10.7 (--)	10.1 (--)	9.6 (--)	9.0 (--)	8.7 (--)	8.4 (--)	8.2 (--)	8.0 (--)	7.7 (--)	7.9 (--)

For each month, the upper figure is the observed or predicted Zürich smoothed sunspot number. The lower figure in parenthesis is the corresponding absolute value of the 90% prediction interval, an indication of the uncertainty above and below the predicted number. Observed numbers are those with no prediction intervals. The observed smoothed sunspot numbers are based on final Zürich numbers through 1975.

The predicted sunspot numbers are derived from a regression analysis based on cycles 8 through 19. Tests indicate that earlier cycles are from a different statistical population. From July 1968 - February 1970 a regression analysis based on cycles 1 through 19 was used because it had not then been proven that two populations exist.

Hα SOLAR FLARES

APRIL 1976

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DATE APR	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	NOAA PLAGE REGION	CMP DAY	MIN.		CORD.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
MONT	01	1041	1042	1108	S11	W19	.333		31.0	27	SN		C	1042	80		E
MONT	01	1442	1448	1508	S07	W19	.324		31.2	26	SF		C	1448	40		E
BUCA	02	0755		0758	S06	W33	.542		30.9	3	SN		C	0756	85	1.0	D
MONT	02	0858	0858	0903	S09	W27	.453		31.3	5	SF		C	0858	20		
CATA	02	0900	0900	0905	S10	W28	.469		31.3	5	SN	1		0900	56	.6	
MONT	02	1205	1211	1243	S06	W36	.585		30.8	38	SN		C	1211	110		
CATA	02	1210	1215	1245	S08	W27	.452		31.5	35	SN	1		1215	84	1.0	T
CATA	02	1555	1600	1625	S13	W37	.603		30.9	30	SB	2		1600	67	.9	D
UPIC	03	0810E		0815	S07	W47	.728		30.8	5D	SF		P	0810	61	44.0	
UPIC	03	0840E		0900	S07	W47	.728		30.8	20D	SF		P	0840	82	59.0	
MONT	03	1015	1021	1034	S05	W44	.692		31.1	19	SF		C	1021	20		D
PALE	03	2052	2054	2103	S 7	W51	.773		31.0	11	SF	3	C		12		DE
RAMY	05	1622	1626	1630	S12	W76	.966		31.0	8	SF	4	C		91		DE
MCMA	05	1625	1627	1630	S12	W78	.974	14143	30.8	5	SF		C	1627	25	1.2	DHL
RAMY	05	1628E	1628U	1630D	S12	W75	.962		31.1	2D	SF	4	V		45		DE
ATHN	06	1351	1353	1358	S 5	E81	.986		12.7	7	SF	4	C		19		DE
MCMA	11	1754		1809	N06	E39	.655	14161	14.7	15	SN		C	1759	45	.6	E
MONT	14	1147E	1150	1201	N05	W02	.207		14.3	14D	SF		C	1150	20		D
RAMY	14	1207E	1217	1235	S13	W 5	.138		14.1	28D	SF	3	C		27		H
MCMA	14	1410	1418	1441D	N04	W01	.188	14161	14.5	31D	SB		C	1418	50	.5	EKW
MONT	14	1426E	1426	1510D	N04	W01	.188		14.5	44D	SN		C	1426	150		B
CATA	14	1430E	1430	1435D	N14	W01	.355		14.5	5D	SN	2		1430	112	1.2	
MONT	16	1012	1013	1015	N03	E49	.765		20.1	3	SF		C	1013	20		D
CATA	16	1205	1210	1215D	N07	W25	.478		14.6	10D	SN	1		1210	112	1.3	
CATA	17	1220	1220	1245D	S09	E50	.761		21.3	25D	SN	2		1220	56	.9	
ATHN	18	1226E	1226U	1228	N 2	W53	.805		14.5	2D	SF	3	C		32		DE
RAMY	19	1101	1107	1113	N 1	W65	.909		14.6	12	SF	4	C		27		DE
RAMY	19	1105E	1107	1113	N 2	W65	.910		14.6	8D	SF	4	V		27		DE
RAMY	20	1233	1257U	1313	N 4	W 9	.245		19.8	40	SF	4	C		27		DE H
RAMY	20	1740E	1836U	1846	N 4	W78	.980		14.9	66D	SF	3	C		63		DE F
RAMY	20	1834E	1836U	1846D	N 3	W77	.976		15.0	12D	SF	3	V		64		
RAMY	20	1834E	1836U	1846D	N 3	W77	.976		15.0	12D	SF	3	C		64		
RAMY	21	1522	1526	1540	N 4	W24	.444		19.8	18	SN	4	C		45		F
RAMY	21	1526E	1530	1537D	N 4	W23	.430		19.9	11D	SN	4	V		48		F H
RAMY	22	1537	1604	1629	S10	W20	.342		21.2	52	SN	4	C		63		U F
RAMY	22	1540E	1604	1630D	S10	W20	.342		21.2	50D	SN	4	V		60		U F
MCMA	22	1559E	1604	1625D	S12	W22	.378	14171	21.0	26D	SN		C	1600	60	.7	E
PALE	25	0208	0215	0233	S10	E30	.497		27.3	25	SF	3	C		21		F
PALE	25	2158	2203	2219	N 3	E63	.896		1.6	21	SN	3	C		57		DE
MCMA	28	1410	1419	1440	N01	E29	.501	14185	1.8	30	SF		C	1419	25	.3	DLS
ATHN	28	1415E	1418	1426	N 3	E30	.524		1.8	11D	SF	5	C		19		DE
RAMY	28	1415	1421	1431	N 3	E29	.510		1.8	16	SF	4	C		27		DE H
RAMY	28	1420E	1421U	1431	N 3	E31	.538		1.9	11D	SF	4	V		27		DE
RAMY	28	1954	2008	2025	S 8	W20	.339		27.3	31	SF	4	C		45		F
MCMA	28	1958E		2000D	S10	W20	.341	14179	27.3	2D	SF		P	1958	40	.5	E
RAMY	28	2014E	2015U	2021	S 8	W21	.356		27.3	7D	SF	3	V		45		F
MONT	29	0813E	0813	0847	S09	W28	.466		27.2	34D	SF		C	0813	20		D
MONT	29	0835	0838	0843	N03	E17	.339		1.6	8	SF		C	0838	60		E
ATHN	29	0839	0841	0843	N 2	E17	.331		1.6	4	SF	5	C		32		F
MONT	29	1124	1125	1157	S08	W29	.481		27.3	33	SN		C	1125	180		
MCMA	29	1125	1126	1158	S09	W28	.466	14179	27.4	33	SB		C	1126	100	1.2	E
MCMA	29	1318	1329	1345	N03	E15	.311	14185	1.7	27	SN		C	1328	50	.5	E
RAMY	29	1325	1332	1338	N 4	E16	.334		1.8	13	SF	4	C		36		DE

Hα SOLAR FLARES

APRIL 1976

OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DATE APR	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	NOAA PLAGE REGION	CMP DAY			CORD.	TYPE	TIME — UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
┌MCMA	29	1904	1923	2005	S09	W31	.511	14179	27.5	61	SB		C	1923	60	.7	E
├RAMY	29	1919E	1920U	1940D	S 8	W31	.511		27.5	21D	SN	3	C		99		F
└RAMY	29	1920E	1920U	1934	S 8	W31	.511		27.5	14D	SN	2	V		75		F
MCMA	29	2106	2118	2126	S09	W33	.540	14179	27.4	20	SB		C	2118	70	.9	E
MANI	30	0605E	0607U	0607D	S08	W40	.638		27.3	2D	SN	3	P	0607	60	.8	
┌ATHN	30	0822	0823	0829	S 9	W39	.624		27.4	6	SF	5	C		19		DE
├ARCE	30	0825		0900D	S07	W40	.638		27.4	35D	SF		C	0845	65	.9	
├MONT	30	0843	0844	0859	S05	W39	.627		27.4	16	SN		C	0844	80		E
├ATHN	30	0844	0845	0848	S 7	W36	.584		27.7	4	SN	4	C		32		F
└CATA	30	0850	0850	0915	S06	W40	.639		27.4	25	SN	2		0850	56	.8	
MONT	30	1008	1010	1020	S08	W39	.625		27.5	12	SF		C	1010	40		E
┌RAMY	30	1242	1250	1302	S 6	W41	.653		27.5	20	SN	4	C		117		FDE
├RAMY	30	1243	1248	1256	S 6	W42	.666		27.4	13	SN	4	V		90		FDE
├MCMA	30	1243	1245	1310	S07	W41	.652	14179	27.5	27	SB		C	1245	160	2.2	E
├ATHN	30	1243	1247	1301	S 5	W41	.654		27.5	18	SN	4	C		95		F
└CATA	30	1250	1255	1315	S05	W41	.654		27.5	25	SB	2		1255	112	1.5	
MCMA	30	1451	1458	1510	S09	W40	.638	14179	27.6	19	SN		C	1458	70	1.0	E
ATHN	30	1608	1611	1619	S 8	W44	.690		27.4	11	SF	2	C		64		F
PALE	30	1839	1841	1845	S 8	W46	.714		27.3	6	SF	3	C		97		
┌RAMY	30	2047	2122	2153D	S 8	W45	.702	14179	27.5	66D	SB	3	C		477		U F
├PALE	30	2048	2108	2215	S 9	W47	.726	14179	27.3	87	SB	3	C		684		Z U
├PALE	30	2048	2108D	2108D	S 9	W47	.726	14179	27.3	20D	SB	3	V		684		Z U
├RAMY	30	2049E	2059	2220D	S 8	W45	.702		27.5	91D	SB	3	V		156		U F
└RAMY	30	2049E	2059	2120D	S 8	W45	.702		27.5	31D	SB	3	C		156		U F
MANI	30	2205E	2205U	2235D	S09	W49	.749		27.2	30D	SN	2	V	2205	110	1.7	ZU

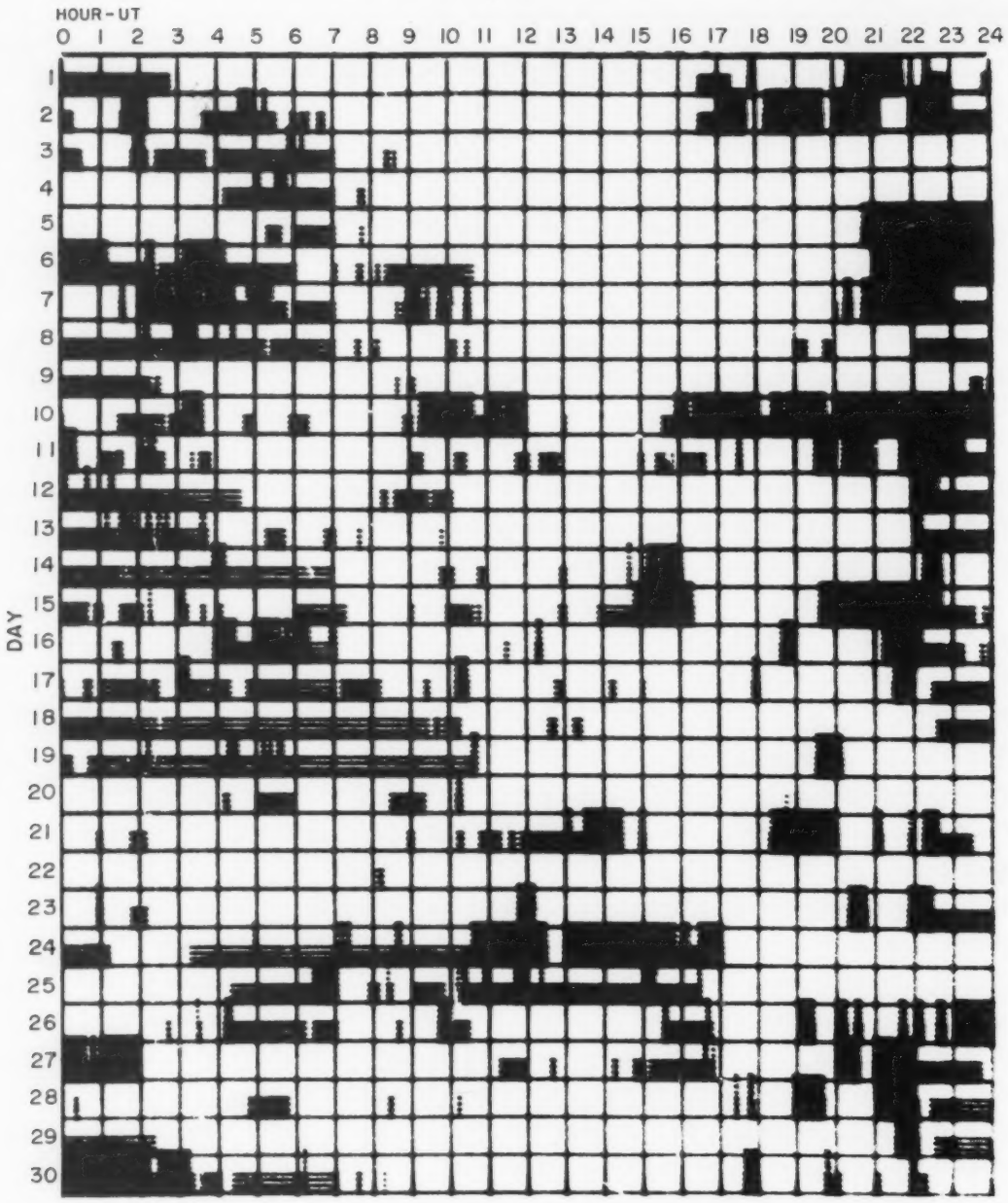
"Remarks":

A = Eruptive prominence whose base is less than 90° from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by a high speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H and K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked asymmetry in Hα line suggests ejection of high velocity material.
S = Brightness follows disappearance of filament (same position).
T = Region active all day.
U = Two bright branches, parallel (||) or converging (Y).
V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

APRIL 1976



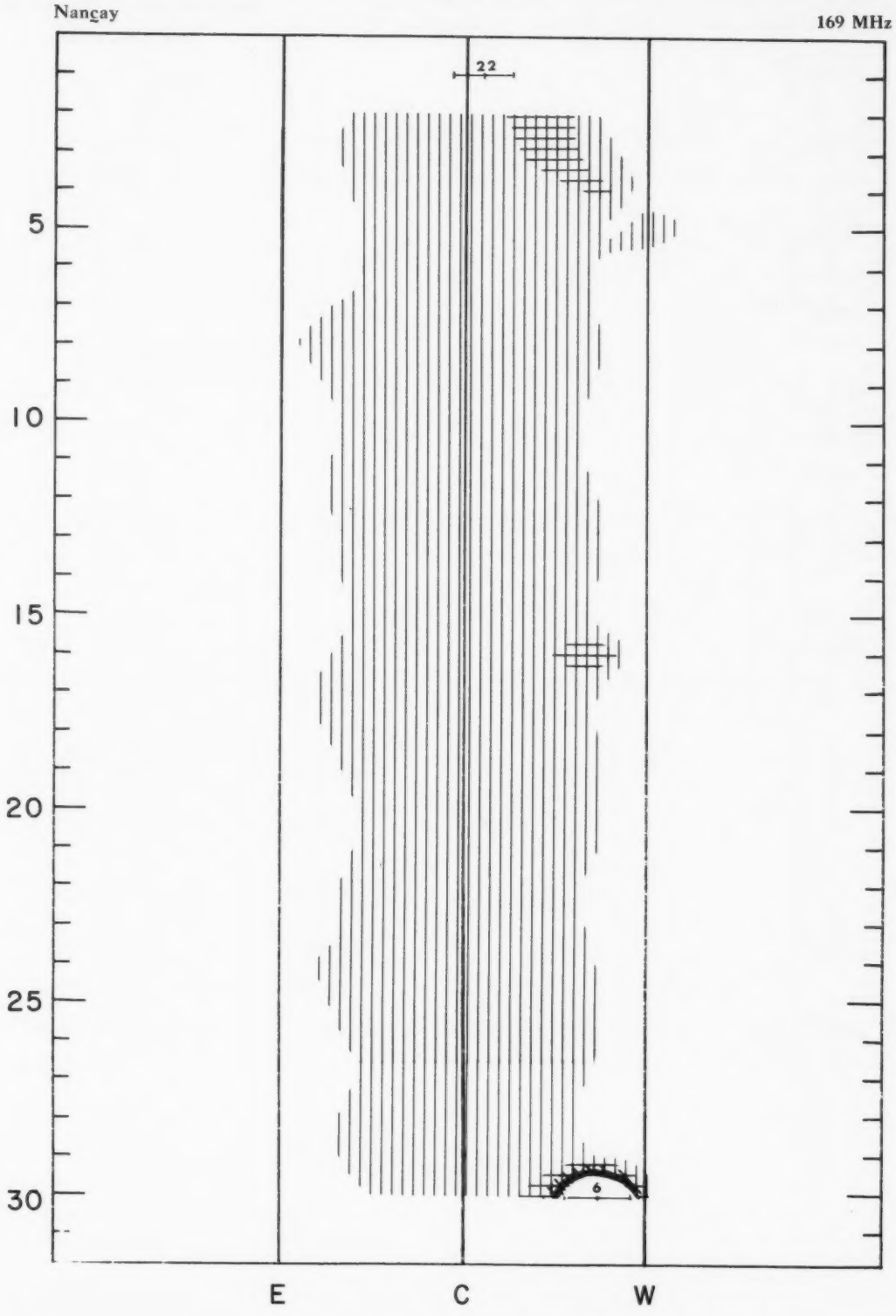
Observatories included in total patrol:

Arcetri	Catania	McMath-Hulbert	Palehua	Upice
Athenes	Herstmonceux	Mitaka	Ramey	Wendelstein
Bucharest	Manila	Monte Mario	Tehran	

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION

APRIL 1976



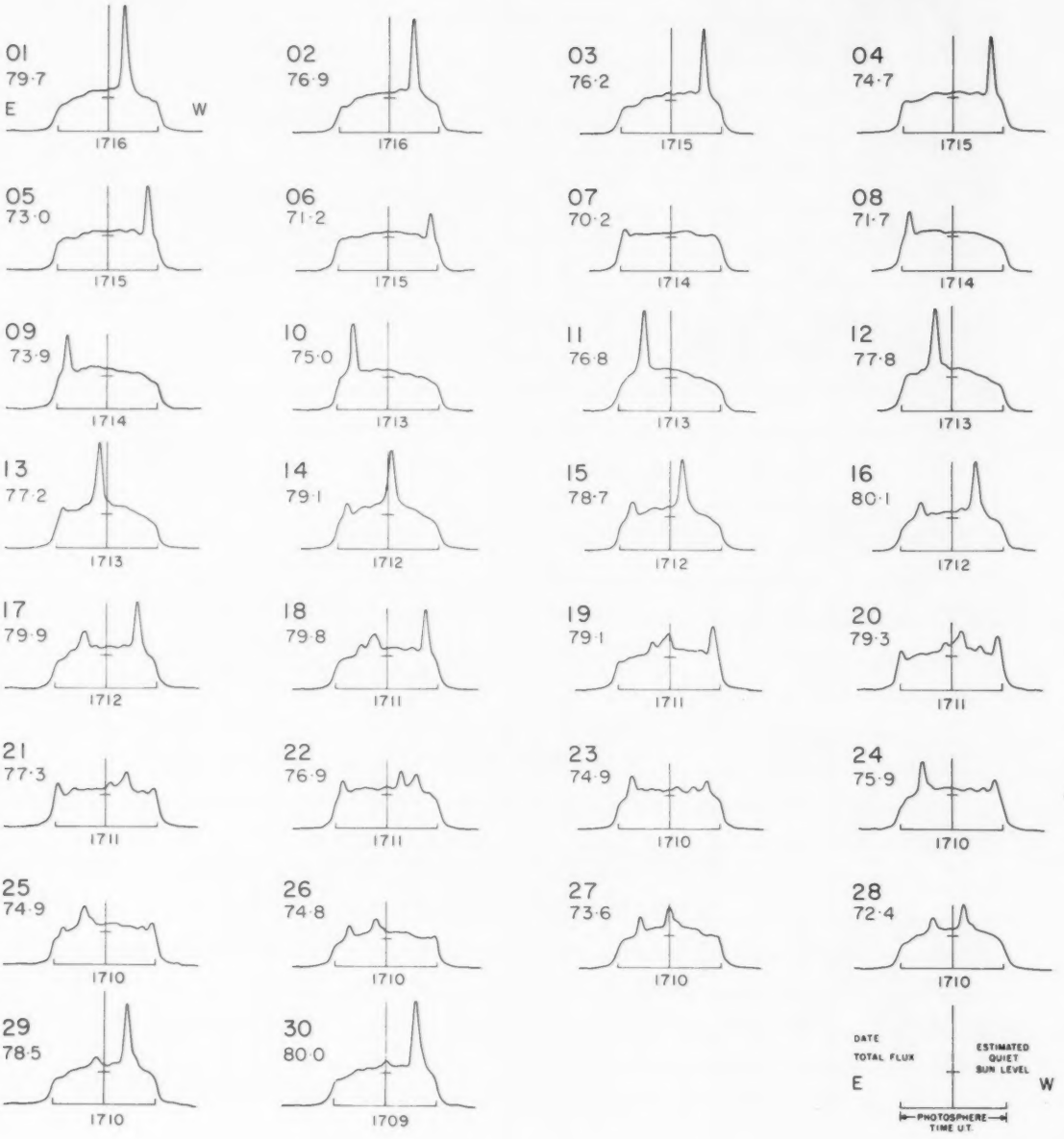
14
Apr 76

EAST-WEST SOLAR SCANS

APRIL, 1976

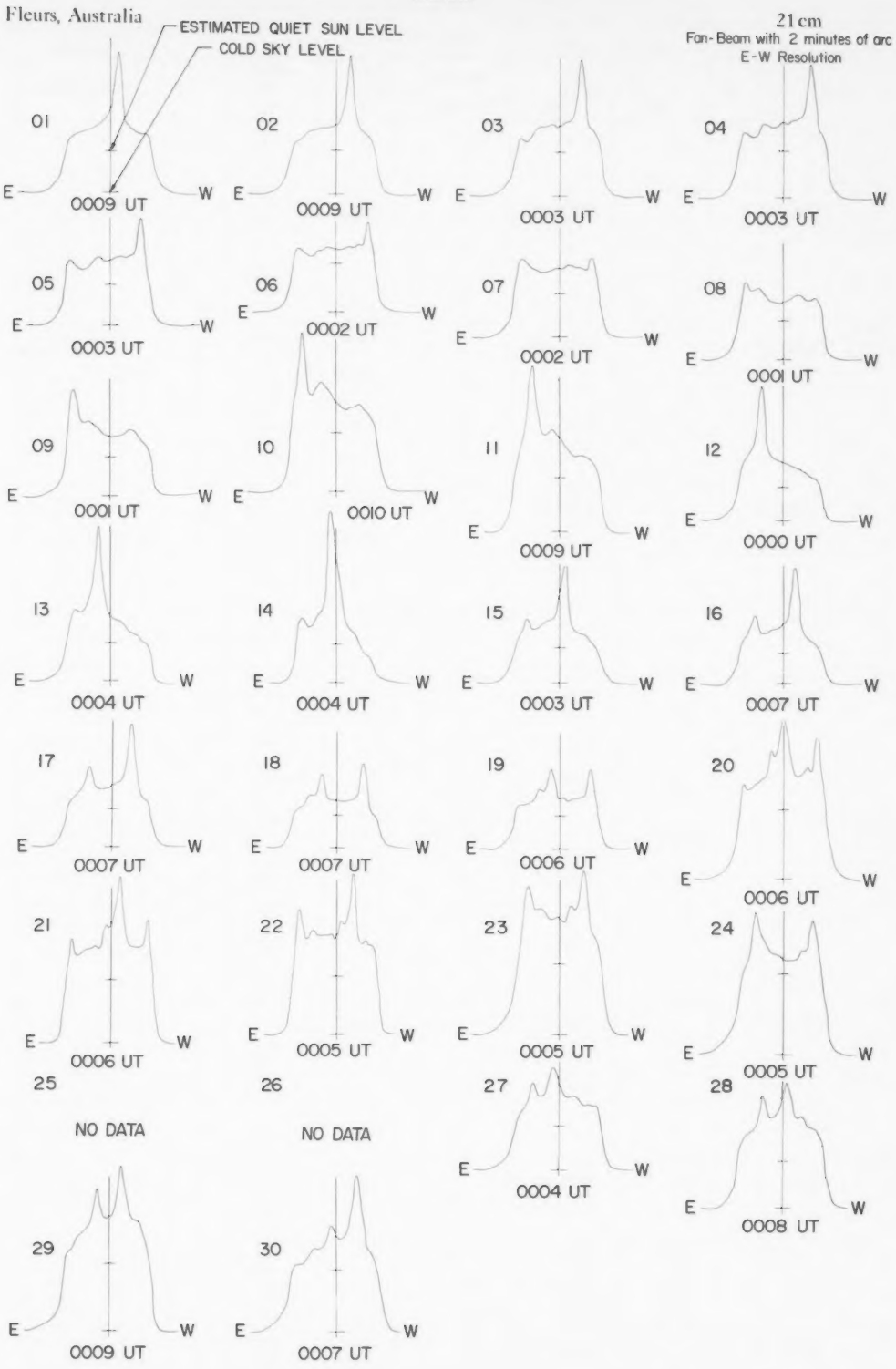
ALGONQUIN RADIO OBSERVATORY
CANADA

10.7cm
Fan Beam with 1.5 minutes of arc
E-W Resolution



EAST-WEST SOLAR SCANS

APRIL 1976



16
Apr 76

EAST-WEST SOLAR SCANS

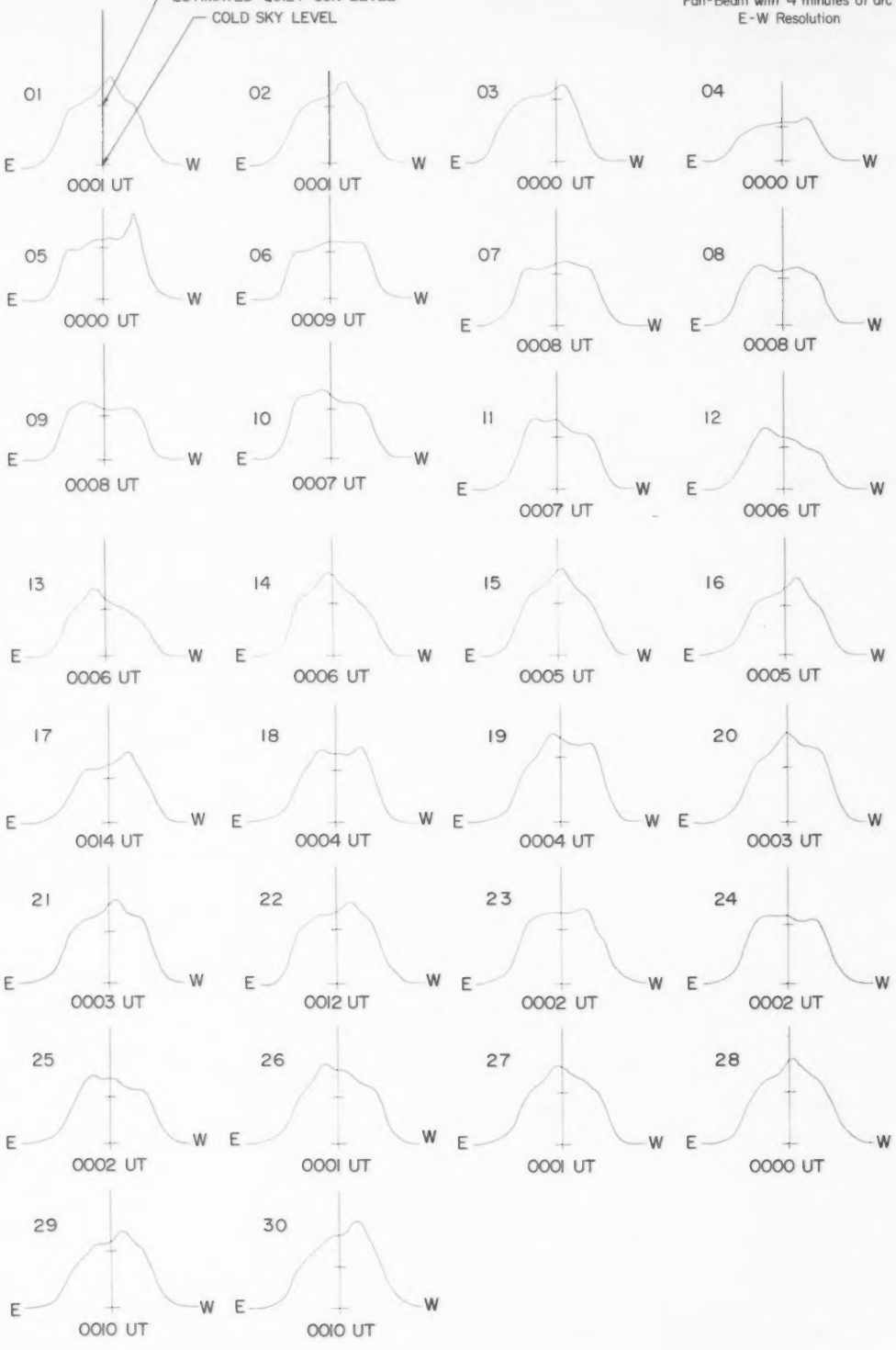
APRIL 1976

Fleurs, Australia

ESTIMATED QUIET SUN LEVEL

COLD SKY LEVEL

43 cm
Fan-Beam with 4 minutes of arc
E-W Resolution



SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS
APRIL 1976

	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
1	2800	OTTA	1 S	2204.5	2204.8	1.5	0.8	0.4		
2	2695	PENT	8 S	0123.2	0123.3	0.5	4.6			
	2695	PENT	21 GRF	1206	1212	55	1.6	0.8		
	2800	OTTA	1 S	1208.6	1210	2.5	2.8	1.4		
	2800	OTTA	20 GRF	1315	1400	95	1	0.5		
	2800	OTTA	27A PF	1450		63	1	0.8		
	2800	OTTA	24 R	1450	1510	20	1	0.5		
	2800	OTTA	24P R	1510		35	1			
	2800	OTTA	1 S	1539.5	1540	1	1	0.5		
	2800	OTTA	26 FAL	1545	1553	8	-1	-0.5		
	2800	OTTA	21 GRF	1557	1603	30	1.6	0.8		
	2695	SGMR	22 GRF	1557.3	1601.8	14.6	6.5	3.9		
	2800	OTTA	8 S	1557.9	1558	0.2	3.2			
	2800	OTTA	8 S	1601.5	1602	0.8	16			
3	8800	SGMR	3 S	1631.6	1632.3	7.3	27.5	8.3		
	2695	SGMR	1 S	1631.9	1632.3	.9	3.1	.9		
	2800	OTTA	8 S	1632	1632.3	0.6	1.4	0.7		
	2800	OTTA	1 S	1704.8	1707	10	0.8	0.4		
	2800	OTTA	20 GRF	2048	2049.5	35	3.2	1.1		
	2695	BOUL	3 S	2049.5	2051	7	2	1		
4	2800	OTTA	20 GRF	1415	1420	25	0.8	0.4		
	2800	OTTA	20 GRF	1555	1600	35	0.8	0.4		
	2800	OTTA	1 S	2117	2119	10	0.8	0.4		
9	2695	PENT	1 S	0007	0009	8	1.4	0.7		
11	2800	OTTA	20 GRF	1756	1804	33	1	0.6		
12	2800	OTTA	8 S	1340.9	1341	0.5	4.8	2.4		
13	2800	OTTA	20 GRF	1658	1715	50	1	0.6		
14	2800	OTTA	20 GRF	1410	1430	80	2.6	1.3		
16	2800	OTTA	22 GRF	1200	1202.5	37	2	1		
	2800	OTTA	22 GRF	2040	2055	50	1	0.5		
19	2800	OTTA	20 GRF	1245		125	1.6			
20	2695	SGMR	40 F	1739	1754.3	62	156	94		
	2800	OTTA	21 GRF	1740	1845	230	6.4	3.2		
	2695	BOUL	49 GB	1744	1756	59.5	120	33		
	2800	OTTA	4 S/F	1750	1752.5	8.5	18	9		SPIKE=85FU
	8800	SGMR	1 S	1750.8	1753.8	4.3	9.3	2.6		
	2800	OTTA	40 F	1758.5	1819.5	42	10.6			
21	2800	OTTA	22 GRF	1523.5	1525.1	15	0.8	0.4		
22	2800	OTTA	21 GRF	1500	1700	220	1.6	0.9		
	2800	OTTA	1 S	1557.5	1559	2	1	0.4		
	2695	BOUL	1 S	1558.5	1559.5	3	2	1		
	2695	BOUL	1 S	1728	1728.5	1.5	2	1		
24	2695	BOUL	3 S	1736.5	1738	3	3	1		
	2800	OTTA	20 GRF	1950	2015	70	1	0.5		
25	2695	BOUL	45 C	1723	1725	4.5	5	2		
	2695	BOUL	3 S	1736	1737.5	3	4	1		
	2800	OTTA	27 RF	2158		52	0.8	0.6		
	2800	OTTA	24 R	2158	2159.6	1.6	0.8	0.4		
	2800	OTTA	24P R	2159.6		30.4	0.8			
	2800	OTTA	26 FAL	2130	2150	20	-0.8	-0.4		
26	2800	OTTA	20 GRF	1937	1943	40	0.8	0.4		
28	2800	OTTA	20 GRF	1953	2005	40	1.4	0.9		
	2800	OTTA	1 S	2117	2118.5	4	0.8	0.4		
	2695	PENT	240 R	2320	0110	110	2.6	1.3		
	2695	PENT	24P R	0101		40 D	2.6			
29	2800	OTTA	1 S	1124.5	1124.9	1.5	4.4	1.2		
	2800	OTTA	20 GRF	1350	1443	120	1.4	0.7		
	2800	OTTA	21 GRF	1552	1745	178	2	1.1		
	8800	SGMR	22 GRF	1852.3	1912.5	58.7	116.5	69.9		
	2800	OTTA	23 GRF	1900	1906	70	5.4	2.7		
	2695	SGMR	22 GRF	1901.5	1910.7	31.7	30.8	18.5		
	2800	OTTA	4 S/F	1909.8	1910.8	6	21	5.2		
	2695	BOUL	8 S	1910	1911.5	9.5	22	7		
	2800	OTTA	8 S	1928.2	1928.6	0.7	1			
	2800	OTTA	8 S	1930.9	1931.1	0.5	1.4	0.7		
30	8800	SGMR	22 GRF	1237.9	1243.8	17.4	18.2	10.9		

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

APRIL 1976

	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
30	2695	SGMR	4 S/F	1237	1243.7	30.2	96.8	29		
	2695	SGMR	4 S/F		1244.3		78			
	2800	OTTA	4 S/F	1242.3	1244.3	7	42	12.3		
	2900	OTTA	29 PBI	1249.3	1249.3	85	2.4	1.2		
	2695	BOUL	45 C	1246.5U	1247	9.5	61	11		
	2800	OTTA	20 GRF	1550	1620	120	2	1		
	2695	BOUL	47 GB	2045	2110	91.5	1776	370		
	8800	SGMR	47 GB	2054.7	2107.7	29.9	2630	789		
	8800	SGMR	29 PBI	2124.6	2124.6	36.4	72	28.8		
	2695	SGMR	47 GB	2055.3	2108.7	24.7	781	234		
	2695	SGMR	29 PBI	2120	2120	41	10.2	4		
	2800	OTTA	28 PRE	2047	2105	14	23	7.8		
	2800	OTTA	47 GB	2101	2109	24	1670	525		
	2800	OTTA	30 PBI	2125	2125	260 D	27			
	2800	OTTA	1 S	2149	2151.2	4.5	1.4	0.7		

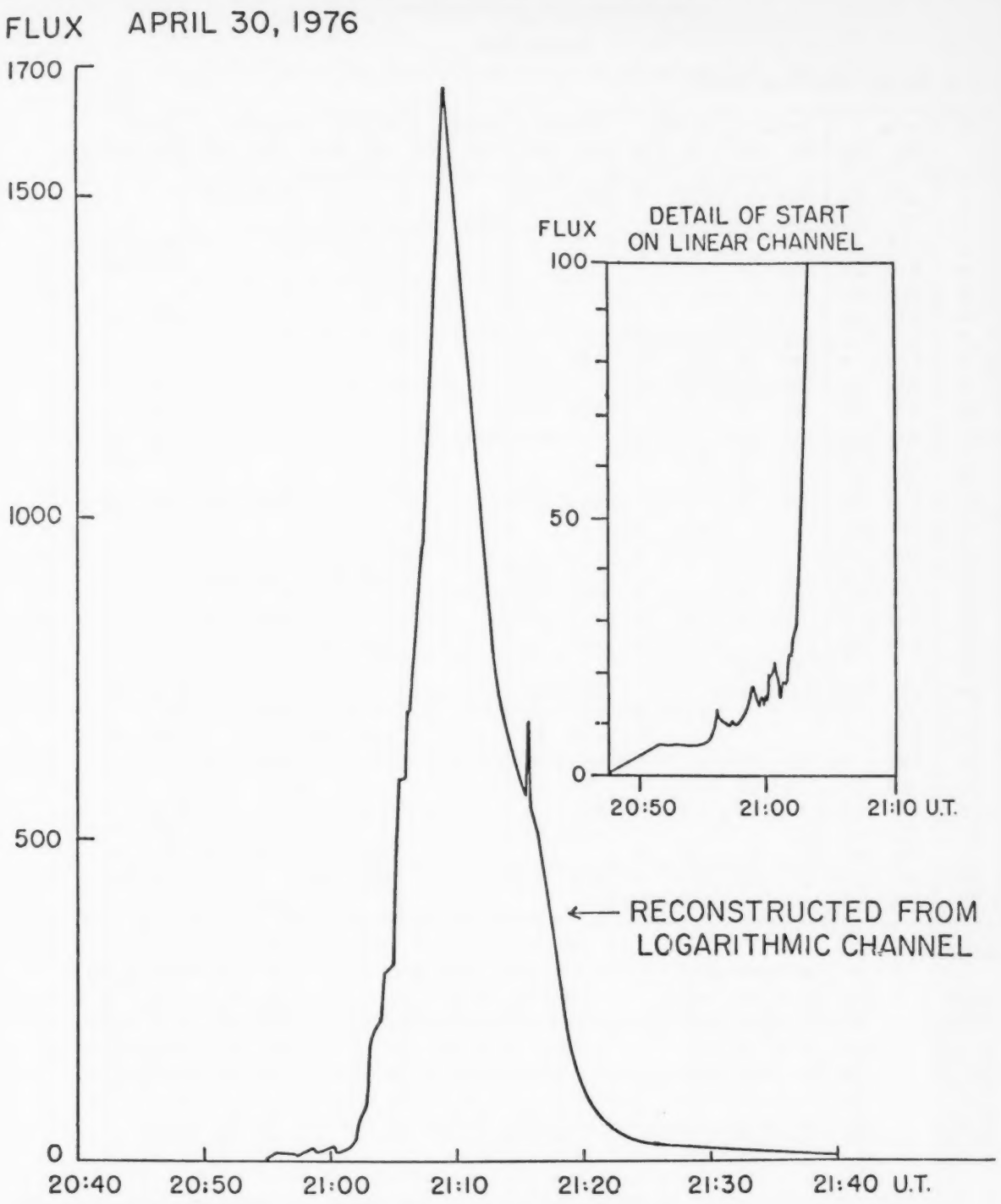
Observatories:

BOUL = Boulder OTTA = Ottawa ARO PENT = Penticton SGMR = Sagamore Hill

Explanation of Type Code:

1 Simple 1
2 Simple 1F
3 Simple 2
4 Simple 2F
5 Simple
6 Minor
7 Minor +
8 Spike
20 Simple 3
21 Simple 3A
22 Simple 3F
23 Simple 3AF
24 Rise
25 Rise A
26 Fall
27 Rise and Fall
28 Precursor
29 Post Burst Increase
30 Post Burst Increase A
31 Post Burst Decrease
32 Absorption
40 Fluctuation
41 Group of Bursts
42 Series of Bursts
43 Onset of Noise Storm
44 Noise Storm in Progress
45 Complex
46 Complex F
47 Great Burst
48 Major
49 Major +

SELECTED SOLAR NOISE BURST



Selected 2800 MHz Solar Noise Burst A.R.O. Ottawa, Ont.

SOLAR WIND

Interplanetary Scintillations

APRIL 1976

UCSD 74 MHZ SCINTILLATIONS

DAY	3C48 VEL	3C48 ERR	3C144 VEL	3C144 ERR	3C147 VEL	3C147 ERR	3C161 VEL	3C161 ERR	3C237 VEL	3C237 ERR	3C273 VEL	3C273 ERR	3C298 VEL	3C298 ERR	3C459 VEL	3C459 ERR
1	485	144	446	17	372	72	547	66					833	333		
2	511	101	391	16					324	52						
3	411	72	449	35											337	36
4	518	134	446	38											537	107
5	500	141														
6	419	42													482	19
7	571	114	413	46	267	28										
8	461	*	210	18	286	51	334	25								
9	504	32	304	34	192	23									319	20
10	572	48	263	76			501	94					196	*	458	36
11	602	106	255	35			437	105	464	43					510	36
12	639	170	311	44	301	50									677	156
13	620	94	255	28			353	74								
14	676	95	294	7			409	23					368	53	639	69
15	638	105			466	*										
16	606	*														
17	749	160	248	35			261	27			491	171	617	105		
18	713	107	190	12	315	*	585	89								
19	771	117	294	4	262	9	290	37					376	*		
20	579	60	314	16	215	10	253	34			335	47				
20			318	12												
21	672	146	240	26			372	32							513	138
22	795	74			232	*	549	136					488	*	511	89
23	579	162					400	26			440	59			583	50
24	552	*	302	76			422	60					435	*		
25	685	36	322	25	539	*	358	16								
26	779	67	354	17	728	*	346	8							310	75
27	777	49	420	47			424	87							435	40
28	783	155	436	46	492	74					323	6	406	75	742	112
29	637	27	427	22	281	*	425	27			260	15			536	146
30	834	31	242	34	357	136							425	*		

APRIL	5 UT	LAT	DIST	DLON	15 UT	LAT	DIST	DLON	25 UT	LAT	DIST	DLON
3C48	21.	36.	0.47	-48.	20.	52.	0.39	-40.	20.	63.	0.36	-5.
3C144	1.	-7.	0.92	-23.	0.	-7.	0.84	-33.	23.	-8.	0.74	-42.
3C147	24.	1.	0.95	-16.	23.	5.	0.90	-24.	23.	11.	0.82	-31.
3C161	2.	-15.	1.00	-15.	1.	-15.	0.96	-15.	1.	-19.	0.91	-21.
3C237	6.	-7.	1.23	-10.	5.	-7.	1.20	-12.	4.	-6.	1.16	-14.
3C273	8.	-5.	1.30	-3.	7.	-4.	1.28	-5.	6.	-4.	1.27	-7.
3C298	10.	-1.	1.28	3.	9.	-1.	1.29	0.	8.	0.	1.29	-2.
3C459	18.	16.	0.44	60.	17.	11.	0.58	52.	17.	8.	0.71	43.

* indicates data for which no error estimate is available, because only two antennas were operating.

3C 147 observed at 0 hr.UT up to April 6, at 23 hr.UT after April 6.

3C 144 observed at 0 hr.UT up to April 20, at 23 hr.UT after April 20.

SOLAR X-RAYS BY SATELLITE
SMS GOES

APRIL 1976

.5 - 4Å Hourly Averages (10^{-6} watts/m^2)

MO DA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
4/ 1	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B	B	B	M	M	M	M	B
4/ 2	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
4/ 3	B	B	B	M	M	M	M	M	M	B	0.01	B	M	M	M	B	B	B	B	B	B	B	B	B	B
4/ 4	B	B	B	B	B	B	B	B	0.03	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/ 5	B	B	B	B	B	B	B	B	M	M	M	M	M	M	M	B	B	B	B	B	B	B	B	B	B
4/ 6	B	B	B	B	M	M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/ 7	B	B	B	B	M	M	B	B	0.01	B	B	M	M	M	B	B	B	B	B	B	B	B	B	B	B
4/ 8	B	B	B	B	M	M	B	B	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B	B	B
4/ 9	B	B	B	B	M	M	B	B	B	B	0.05	B	0.03	B	B	B	B	B	B	B	M	0.04	B	B	B
4/10	B	B	B	B	B	B	B	B	B	B	0.05	B	B	B	B	B	B	B	B	B	B	0.14	B	B	B
4/11	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/12	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/13	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/14	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/15	B	B	B	B	B	B	B	B	B	B	0.07	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/16	B	B	B	B	B	B	B	B	B	B	0.03	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/17	B	B	B	B	B	B	B	B	B	B	0.04	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/18	B	B	B	B	B	B	B	B	B	B	B	B	0.05	B	B	B	B	B	B	B	B	B	B	B	B
4/19	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/20	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B	B	B	B	B	B	B	B
4/21	0.02	B	B	B	0.02	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B	B	0.33	B	B	0.02
4/22	B	B	B	B	B	0.10	0.05	0.02	0.01	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/23	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/24	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	0.05	B	B	B
4/25	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/26	B	B	B	B	0.01	B	B	B	B	B	0.07	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/27	B	B	B	B	B	B	B	B	B	B	0.03	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/28	B	B	B	B	B	B	B	B	B	B	0.06	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/29	B	B	B	M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	0.03	B	0.07	B	B	B
4/30	B	B	B	B	B	B	0.01	B	B	B	B	B	B	B	B	B	B	B	B	B	0.02	1.14	0.08	0.03	0.05

Note: "B" indicates the flux was below the cut-off levels.
"M" denotes periods of missing data.

SOLAR X-RAYS BY SATELLITE
SMS GOES

APRIL 1976

1 - 8Å Hourly Averages (10^{-5} watts/m^2)

YD DA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
4/ 1	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B	B	B	M	M	M	M	B
4/ 2	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
4/ 3	B	B	B	M	M	M	M	M	M	B	0.01	B	M	M	M	B	B	B	B	B	B	B	B	B	B
4/ 4	B	B	B	B	B	B	B	B	0.03	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/ 5	B	B	B	B	B	B	B	B	M	M	M	M	M	M	M	B	B	B	B	B	B	B	B	B	B
4/ 6	B	B	B	B	M	M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/ 7	B	B	B	B	M	M	B	B	B	B	B	M	M	M	B	B	B	B	B	B	B	B	B	B	B
4/ 8	B	B	B	B	M	M	B	B	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B	B	B
4/ 9	B	B	B	B	M	M	B	B	B	B	0.05	B	0.02	B	B	B	B	B	B	B	M	0.04	B	B	B
4/10	B	B	B	B	B	B	B	B	B	B	0.05	B	B	B	B	B	B	B	B	B	B	0.14	B	B	B
4/11	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/12	B	B	B	B	B	B	B	B	B	B	B	B	B	B	0.02	0.01	B	B	B	B	B	B	B	B	B
4/13	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/14	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/15	B	B	B	B	B	B	B	B	B	B	0.07	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/16	B	B	B	B	B	B	B	B	B	B	0.10	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/17	B	B	B	B	B	B	B	B	B	B	0.05	B	B	B	B	B	B	B	B	B	0.01	B	B	0.03	B
4/18	B	B	B	B	B	B	B	B	B	B	B	B	0.05	B	B	0.01	B	B	B	B	B	B	B	B	B
4/19	B	B	B	B	B	B	B	B	B	0.03	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/20	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	B	0.02	0.01	B	B	B	B	B
4/21	0.04	B	B	B	0.03	0.03	B	B	B	B	B	B	0.04	B	B	B	M	B	B	B	B	0.08	B	B	0.01
4/22	B	B	B	B	B	0.04	0.07	0.01	B	B	0.08	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/23	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/24	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	0.05	B	B	B
4/25	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/26	B	B	B	B	B	B	B	B	B	B	0.07	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/27	B	B	B	B	B	B	B	B	B	B	0.03	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/28	B	B	B	B	B	B	B	B	B	B	0.10	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4/29	B	B	B	M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	0.04	B	0.07	B	B	B
4/30	B	B	B	B	B	B	0.02	B	B	B	B	B	B	B	B	B	0.02	B	B	B	0.02	0.77	0.12	0.05	0.05

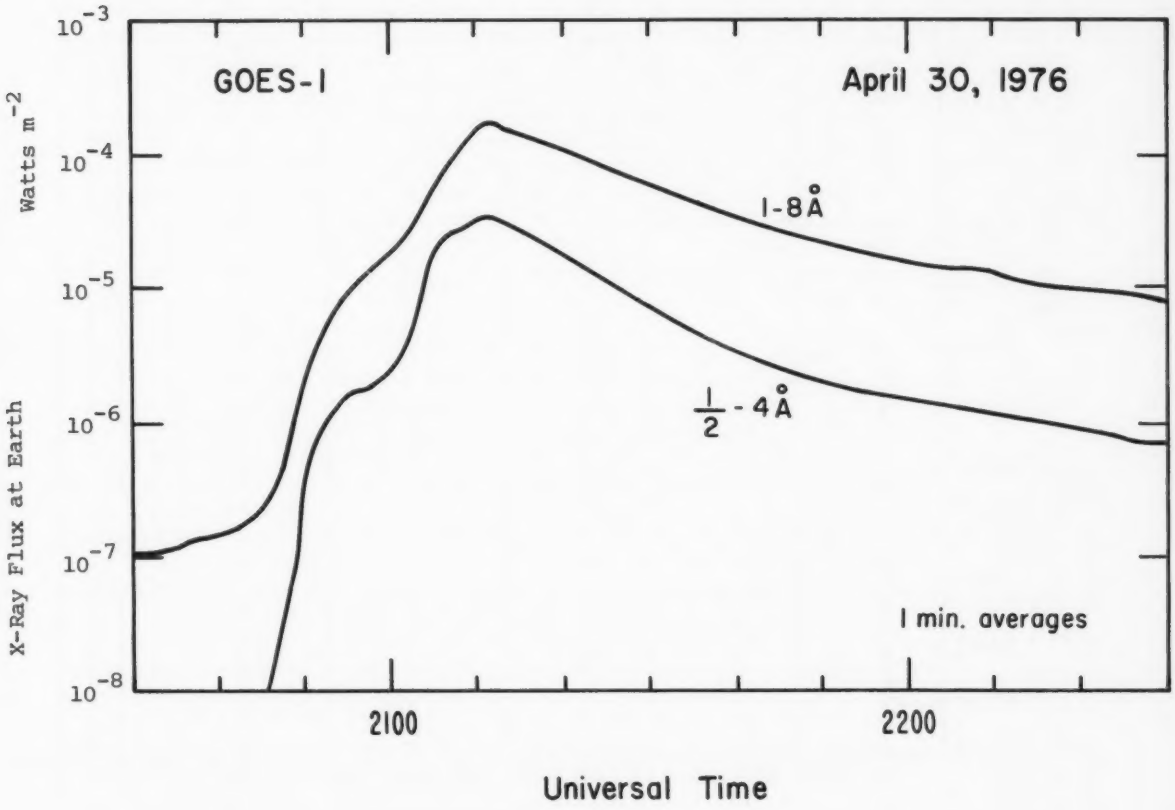
Note: "B" indicates the flux was below the cut-off levels.
"M" denotes periods of missing data.

SOLAR X-RAYS BY SATELLITE
SMS GOES

APRIL 1976

DAY	BEGIN TIME	.5-4A Wm^{-2}	1-8A Wm^{-2}	MAX TIME	.5-4A Wm^{-2}	1-8A Wm^{-2}	1/2P TIME	.5-4A Wm^{-2}	1-8A Wm^{-2}
9	1205	6.0E-10	7.8E-03	1210	3.4E-07	6.7E-05	1212	4.5E-10	3.4E-05
29	1858	0.0E+00	1.6E-07	1916	1.0E-06	9.8E-06	1923	2.1E-07	5.0E-06
30	0547	9.0E-09	4.6E-07	0559	6.5E-07	6.9E-06	0614	1.6E-07	3.7E-06
30	1240	5.7E-10	1.7E-07	1247	2.1E-07	3.0E-06	1252	5.1E-08	1.6E-06
30	2043	0.0E+00	1.6E-07	2114	3.3E-05	1.3E-04	2123	9.3E-06	8.3E-05

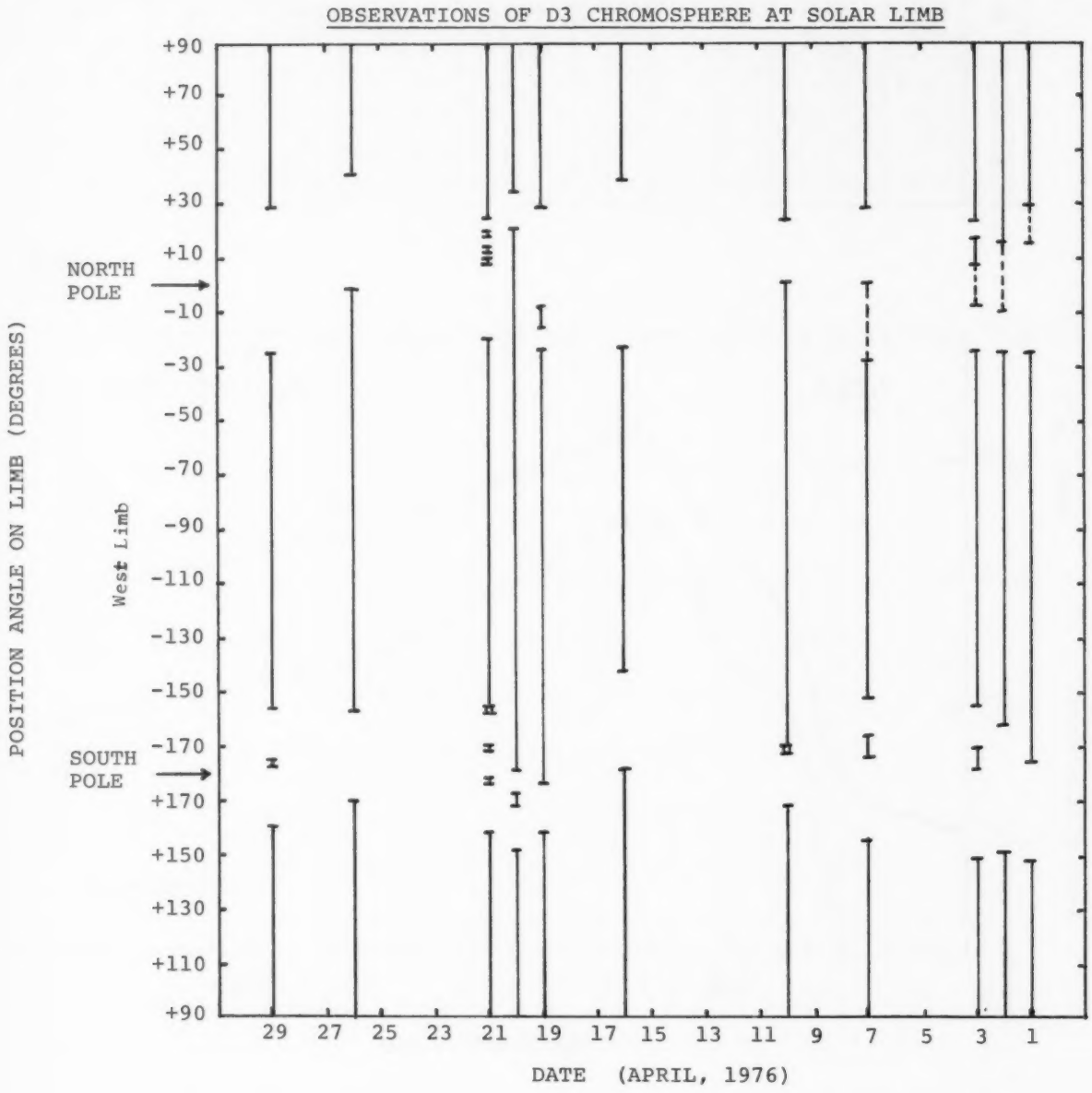
23



CORONAL HOLES

Helium D3 Chromosphere at Solar Limb

APRIL 1976



INFERRED IP MAGNETIC FIELD

BARTELS ROTATION	DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1934	DEC 31	T A	T T	T T	A TA	A T	A T	A -	A -	TA T	A A	AT -	A A*	A *	T T	T T	T T	T T	T* T	T* T	T T	T T	T T	T *	A A	A A	AT A*	A A
1935	1975 JAN 27	T T	T A	T AT	T A	A* A	T- TA	A A	T A	T A	T A	T A	T A	T -	T T	T T	T AT	T T	T T	T* T	- TA	A T	A* AT	T A	TA TA	T A	A A	A A
1936	FEB 23	TA A	A A	A A*	TA A	A AT	A A	A A	A A	A A	AT T	A A	A A	A A	T T	T T	T A	T A*	T T	T T	TA T	A* T	T T	T A	T *	T T	T T	A A
1937	MAR 22	A A	A A	TA A	T T	A A*	A A	A A	A A	AT A*	T A	A A	T *	TA T	T T	T T	T *	T A*	T T	A AT	A T	T T	A T	A A	T T	T T	A A	A A
1938	APR 18	A A	A A	A A	A A	* A	A* A	A -	A A	A A	A A	A T	T A	A A	A T	T -	T T	T -	T T	T T	T A	A* T	T T	T -	A T	AT T	T TA	T
1939	MAY 15	T T	A A	TA TA	A A	A A	T T	TA TA	- *	A A	A A	A A	- -	- -	- -	- -	- -	- -	- -	- -	- -	T -	* -	* -	* *	T T	T T	A A
1940	JUN 11	A A	A A	A A	A A	A A	* -	- -	- -	- -	A A	A A	TA A	A AT	A A	A A	A A	T T	T T	T A	A TA	* A	A T	T T	T T*	T T*	T T	
1941	JUL 8	A A	A A	A A	A A	TA A	A A	TA *	A A	TA TA	A A	T T	A A	A A*	- *	A A*	A T	A A	T T	T TA	A AT	T T	T T	T T	T T	AT AT	A A	A A
1942	AUG 4	A A	A A	A T	A A	T T	AT T	A A	A A	A A	A A	A A	A A	A A	T T	T -	A T	T *	T T	TA T	T T	T T	T T	T -	AT AT	T T	T A	A A
1943	AUG 31	A A	A A	TA A*	T T	A A	A A	TA A	T T*	A A	A A	A A	A A	A *	A A	A A*	A A*	A T	T T	T T	T -	T TA	T T	T T	T T	T T	T A	T A	A
1944	SEP 27	A A	T A	A A	A A	T T	T A	T -	A -	A -	A A*	A A	A A	A *	AT A	T T	A A	A A	AT *	T A	T T	T A	T T	T T	T T	T T	TA A	A -
1945	OCT 24	T T	T T	T T	T T	T TA	A A	A *	A A	A A	A A	A A*	A *	A A	A *	AT -	AT -	AT T	AT T	T T	T T	T T	T T	T T	T A	T *	T T	T T	T T
1946	NOV 20	A T	A *	T T	TA T	T A	A T*	A T*	A A	A -	A -	A -	A A	A *	A *	A A	A A	A A	AT A	AT T	T T	T T	T T	T T	T *	T T	T T	T T	T T
1947	DEC 17	T -	T T	T T	T T	T T	T T	TA *	A T	A T	A *	AT *	TA A	A A	A *	A A	A A	A A	T T*	T A	T *	T T	T T	T T	T T	A* TA	* T	* T	T T
1948	1976 JAN 13	TA T	T T*	T TA	T T	TA A	TA T	AT T	A A	A T	A -	A -	A *	A A	A -	A -	A A	A -	A -	T T	T T	T T	T T	T T	T T	T T	TA T	T T	T
1949	FEB 9	T A	T A	T T	T -	T -	A T	T -	TA A	T A	AT A*	T T	A TA	A A	A A	A A	A A	T A	A T	T T	T T*	T A	T T	T T	T T	T T	* T	A T	TA TA*	
1950	MAR 7	T A	T A	T T	T T	T T	T T	T -	T TA	A A*	A A	TA A	A A	A A	A A	A A	A A	* T	* T	AT T	T T	T T	T T	T T*	T T	T T	T -	TA T	T T	T
1951	APR 3	T T	T T	T T	T T	T T	T T	T *	A A	A A	A A	A *	A A	A A	A A	A A	A A	A A	A A	AT A	TA T*	A T*	T T	T T	T *	AT T	TA A*	T T	
1952	APR 30	T T																										

T = towards the sun A = away from the sun * = effect doubtful or not discernable - = missing data

The table shows daily inferences of the polarity of the interplanetary magnetic field. The first half of the day is based principally on magnetograms produced by the magnetometer at the Vostok Antarctic Station of the USSR. The magnetometer of the U.S. Air Weather Service operated by the Air Force Geophysics Laboratories at the Thule Geopole Station is used for the second half of the day.

SOLAR PROTON EVENT (Provisional)

APRIL 30 - MAY 1, 1976

30/2048Z	Start Importance 2Bright flare at S09 W47.
2114Z	Maximum
30/2130Z	First Protons detected on SMS/GOES in the 6-10 Mev Range.
30/2215Z	Polar Cap Absorption reached 1.0 db on the Thule 30 MHz riometer.
30/2330Z	Peak Proton Flux observed on NOAA-4 for >10 Mev at 4.65×10^3 particles/cm^2/sec.
30/2330Z	Peak Proton Flux observed on SMS/GOES in the 18-38 Mev range of 90 particles/cm^2/ster/sec.
01/0130Z	Maximum absorption on the Thule 30 MHz riometer of 2.7 db.
01/0430Z	Peak Proton Flux observed on SMS/GOES in the 6-10 Mev range of 65 particles/cm^2/ster/sec.
01/2130Z	Absorption on the Thule 30 MHz riometer returned to 1.0 db.

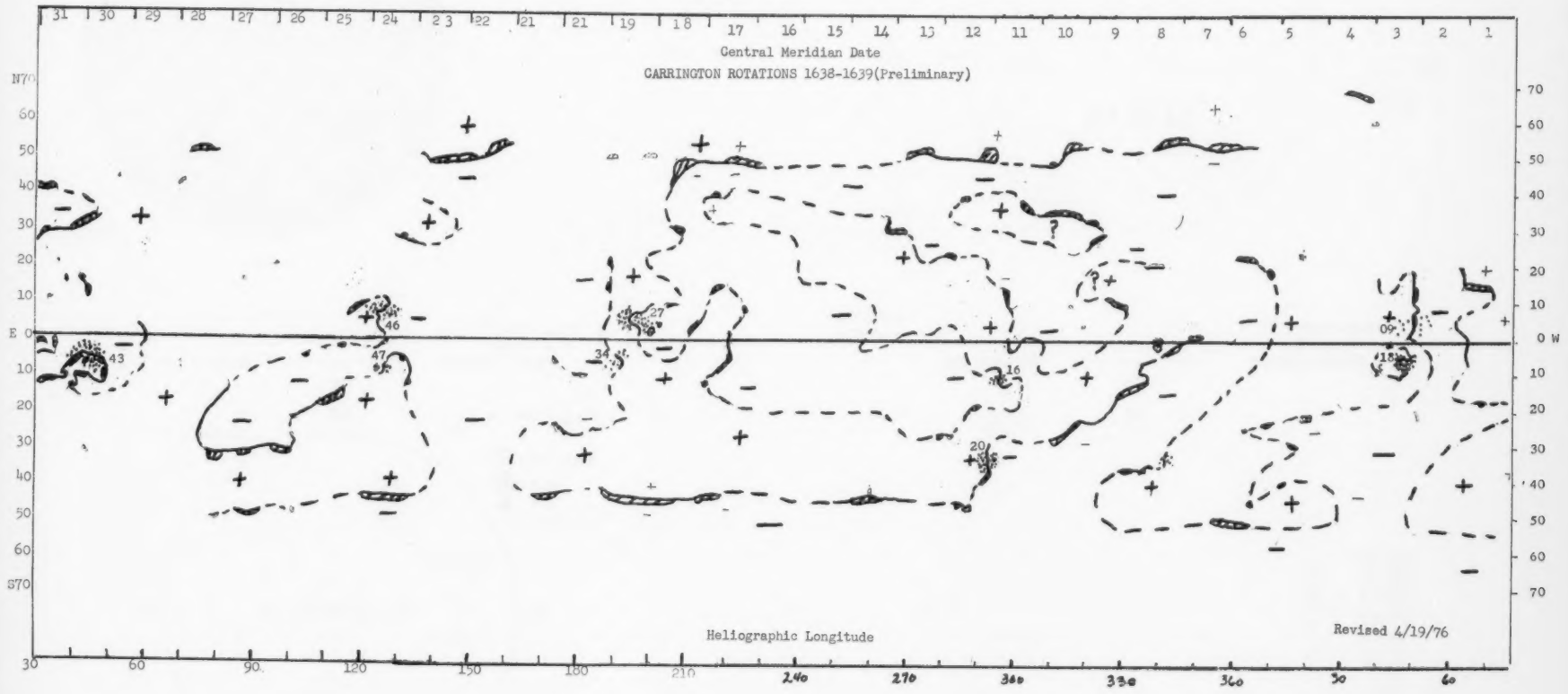
MARCH 1976 DATA

Contents

	Page
Daily Solar Activity Centers	
Hα Synoptic Chart	29
X-ray, EUV, Magnetograms, Calcium Plages, Hα Spectroheliograms Sunspots, Corona and 2 cm and 8.6 mm Spectroheliograms	30-91
Individual Regions of Solar Activity	92-97
Daily Calcium Indices	97
Sudden Ionospheric Disturbances	
Table of Events	98
Number of Events in each Plage Region	99
Solar Radio Waves	
Spectral Observations	100-112
Selected Events by Radioheliograph	113
Cosmic Rays	
Chart of Variations	114-117
Neutron Monitors Daily Values	118
Geomagnetic Indices	
Table of Indices Kp, Kn, Ks, Km, Cp, Ap, aa	119
12-Month Table of Daily Averages Ap	120
Chart of Kp by Bartel's 27-day Rotation	121
Chart of Dst by Bartel's Rotation	122
Equatorial Indices Dst	123
Principal Magnetic Storms	124
Sudden Commencements and Solar Flare Effects	125
Radio Propagation Indices	
North Atlantic Quality Figures and Forecasts	126
Transmission Frequency Ranges - North Atlantic Path	127-128
Quality Indices on Paths to Germany	129

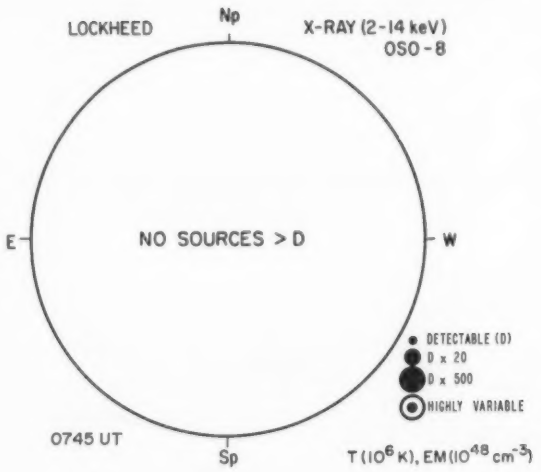
Hα SYNOPTIC CHART

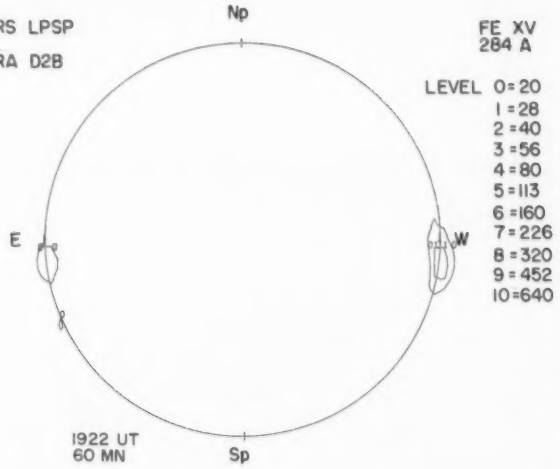
MARCH 1976

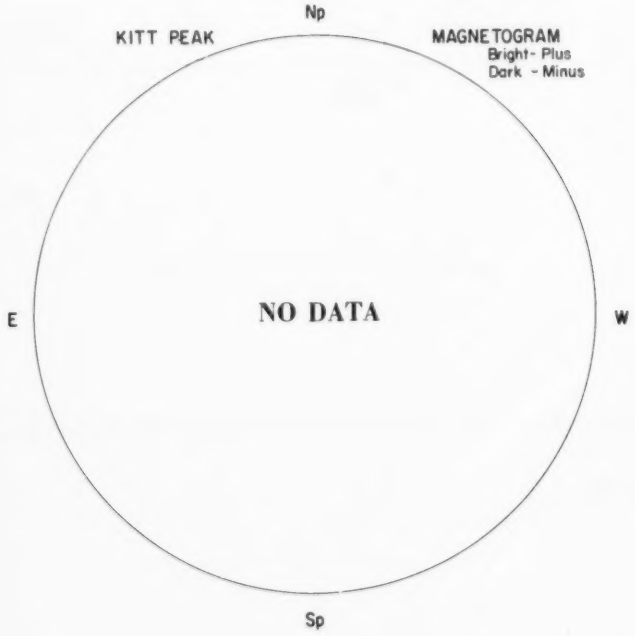


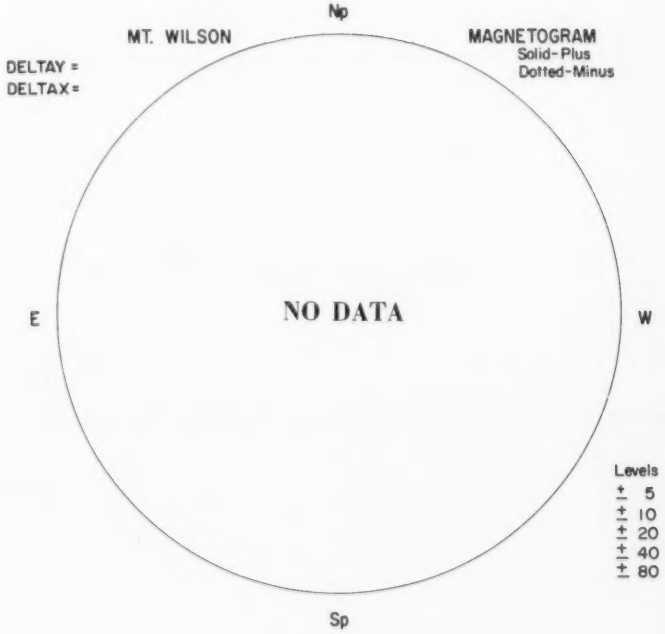
29 Mar 76

MARCH 1, 1976 (P = -21.61, B_o = -7.22, L_o = 78.53)









01

RAMEY AFB

Np

E W

Sp

1223 UT

Hα

BOULDER

Np

SUNSPOTS

E W

NO SPOTS VISIBLE

1800 UT

Sp

CORONA

KISLOVODSK

NO DATA 270°

CATANIA

Np

CALCIUM REPORT

E W

0742 UT

Sp

FAIR GD

40 0990 --

NELC LA POSTA

Np

2.0 CM

NO DATA

E

WEATHER

W

---- UT

Sp

Ant. Temp. Unit 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E

WEATHER

W

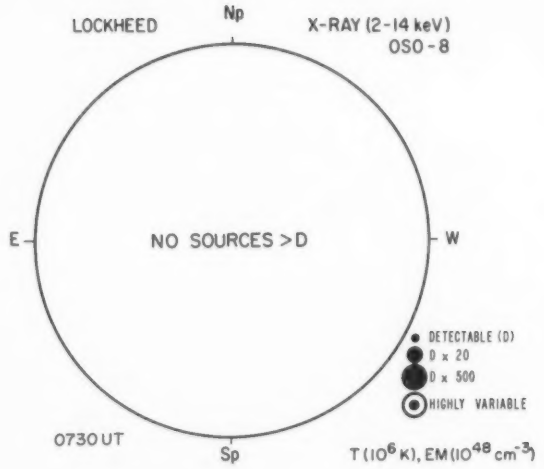
---- UT

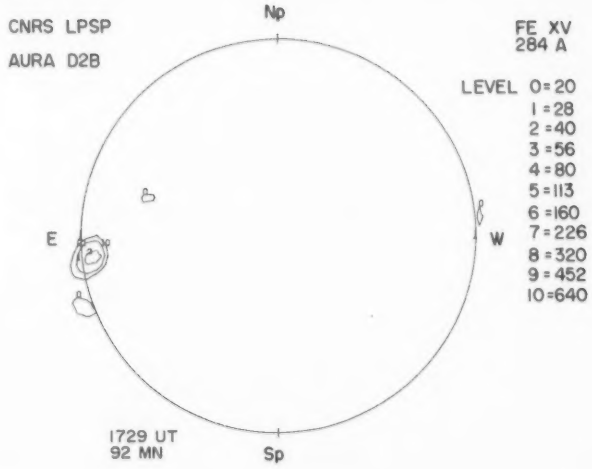
Sp

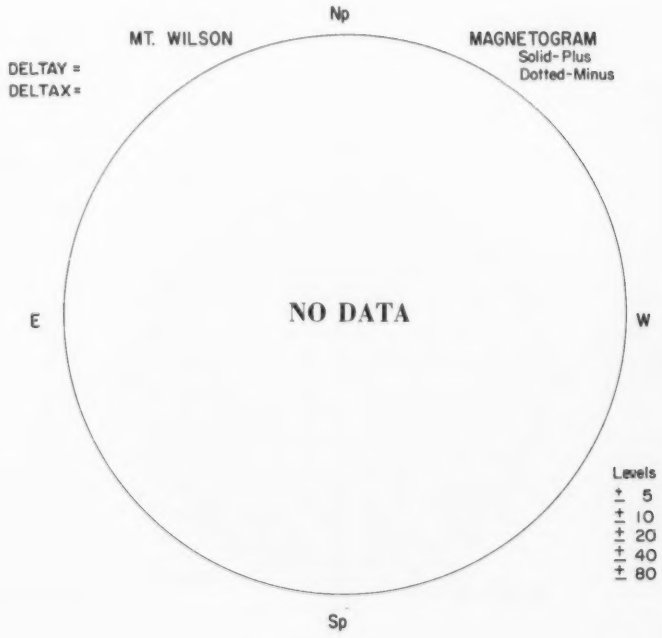
Ant. Temp. Unit 100°K

31 Mar 76

MARCH 2, 1976 (P = -21.86, B_o = -7.23, L_o = 65.36)

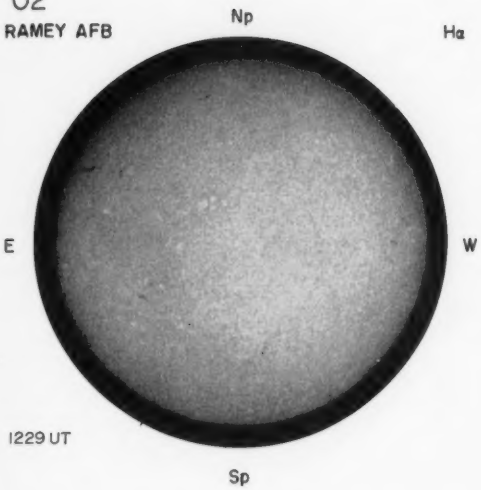




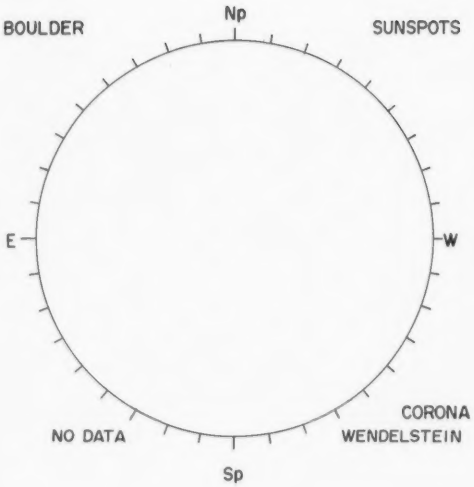


02

RAMEY AFB

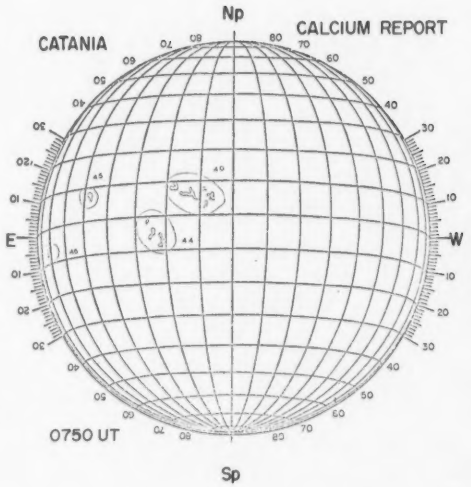


BOULDER



CATANIA

CALCIUM REPORT

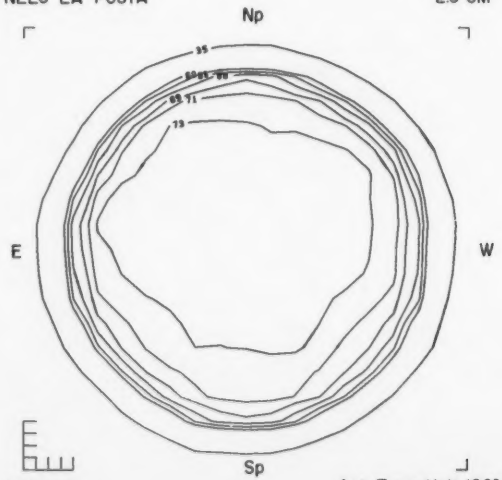


FAIR | GD

40 0743 --

NELC LA POSTA

2.0 CM



2055 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM

NO DATA

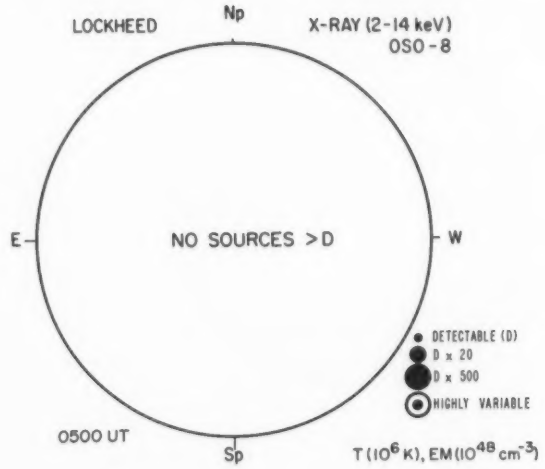
WEATHER

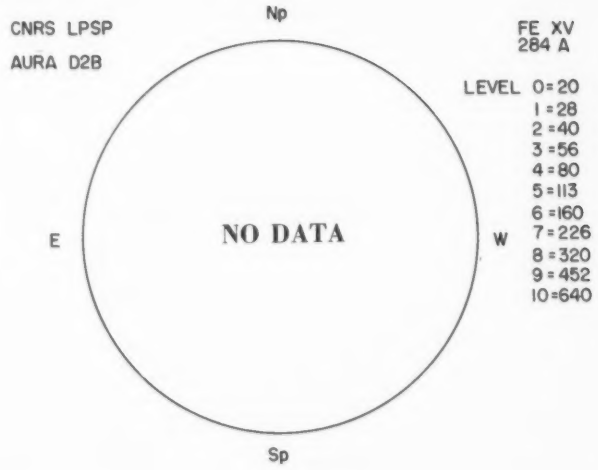
---- UT

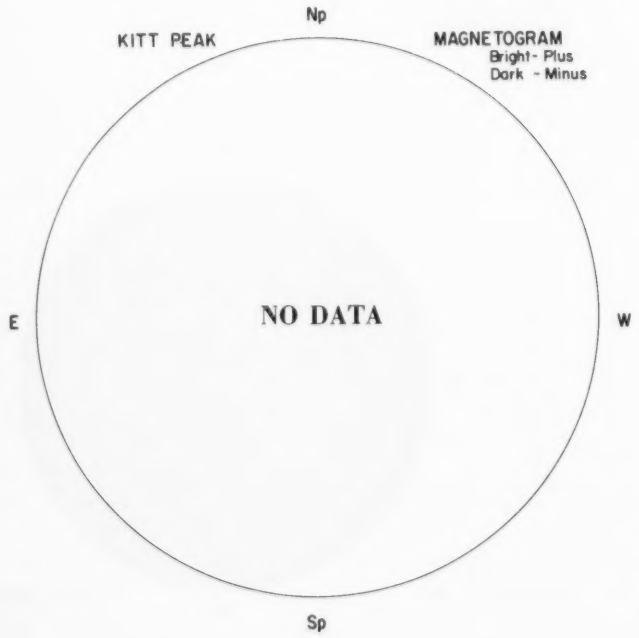
Ant. Temp. Unit 100°K

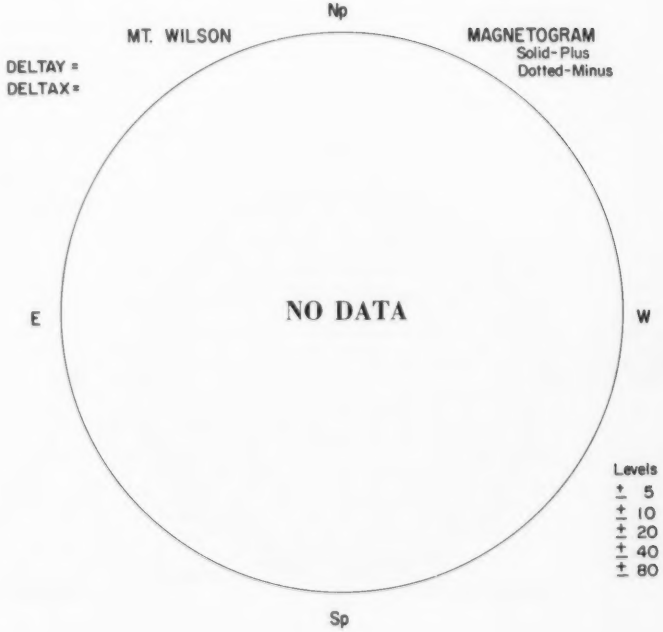
33
Mar 76

MARCH 3, 1976 (P = -22.10, B_0 = -7.24, L_0 = 52.19)







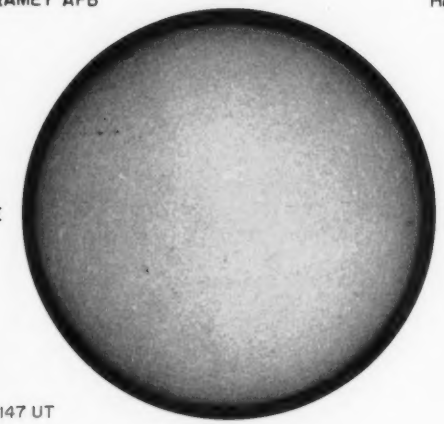


03

RAMEY AFB

Np

Hα



E

W

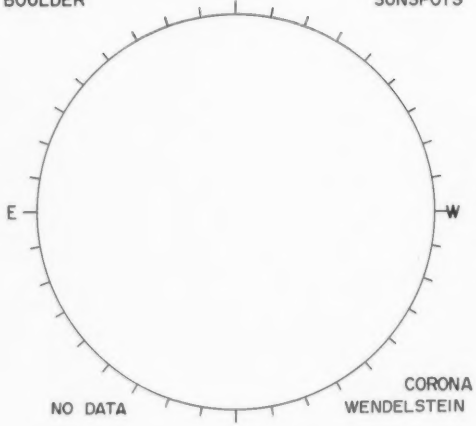
1147 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

NO DATA

CORONA

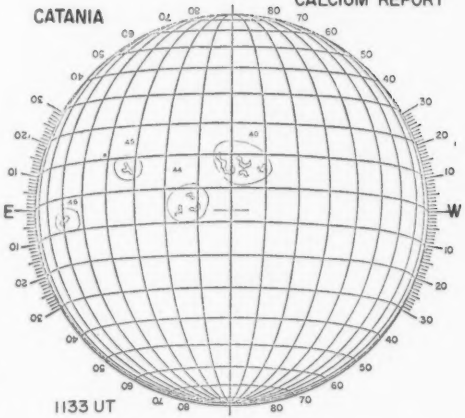
WENDELSTEIN

Sp

CATANIA

Np

CALCIUM REPORT



E

W

1133 UT

Sp

POOR | GD

40 0907 --

NELC LA POSTA

Np

20 CM

NO DATA

E

WEATHER

W

Sp

---- UT

Ant. Temp. Unit 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E

WEATHER

W

Sp

---- UT

Ant. Temp. Unit 100°K

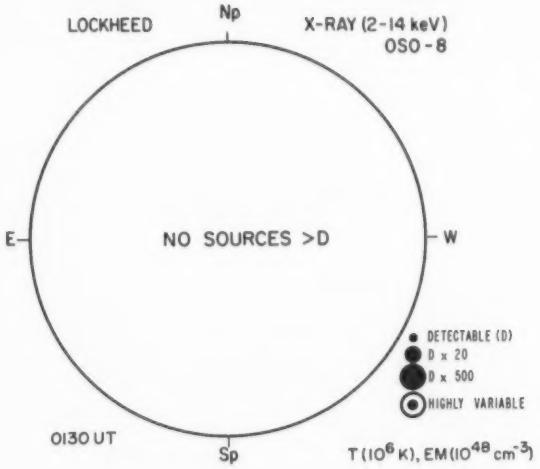
35

Mar 76

MARCH 4, 1976 (P = -22.34, B_o = -7.25, L_o = 39.01)

LOCKHEED

X-RAY (2-14 keV)
OSO-8

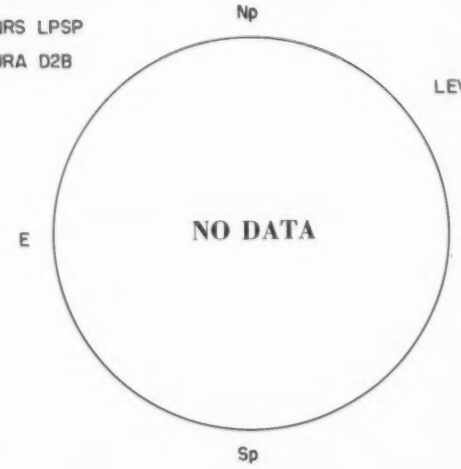


0130 UT

T (10^6 K), EM (10^{48} cm^{-3})

CNRS LPSP
AURA D2B

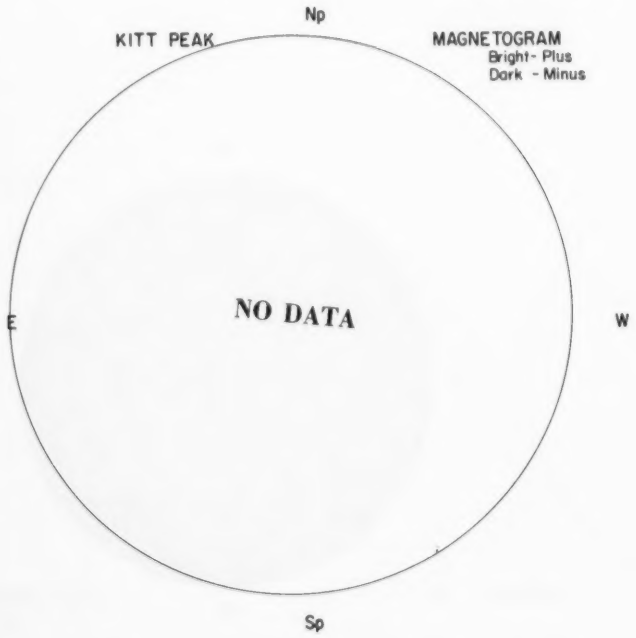
FE XV
284 A



LEVEL 0 = 20
1 = 28
2 = 40
3 = 56
4 = 80
5 = 113
6 = 160
7 = 226
8 = 320
9 = 452
10 = 640

KITT PEAK

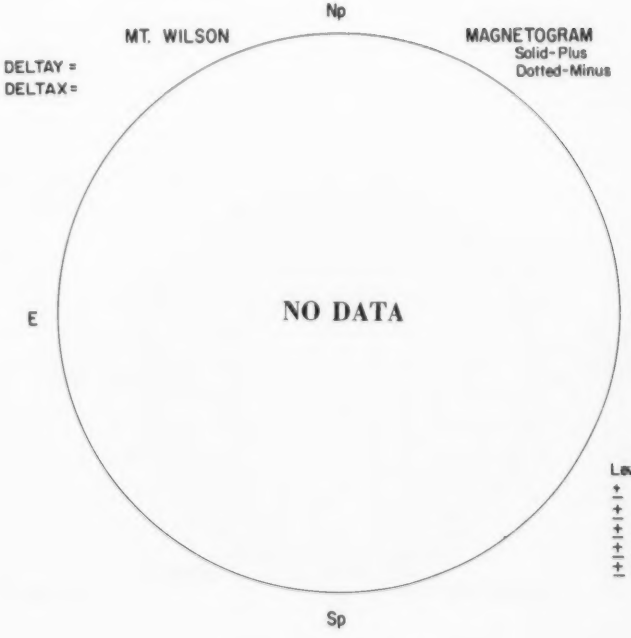
MAGNETOGRAM
Bright - Plus
Dark - Minus



MT. WILSON

DELTAY =
DELTAX =

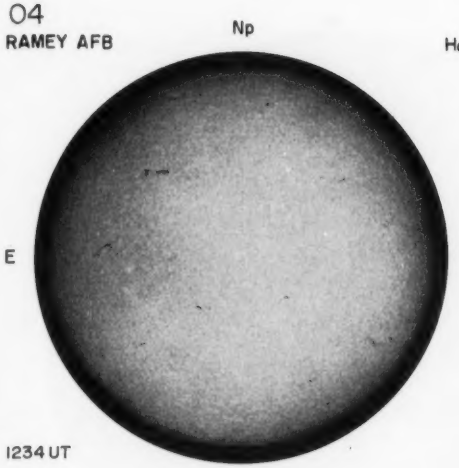
MAGNETOGRAM
Solid - Plus
Dotted - Minus



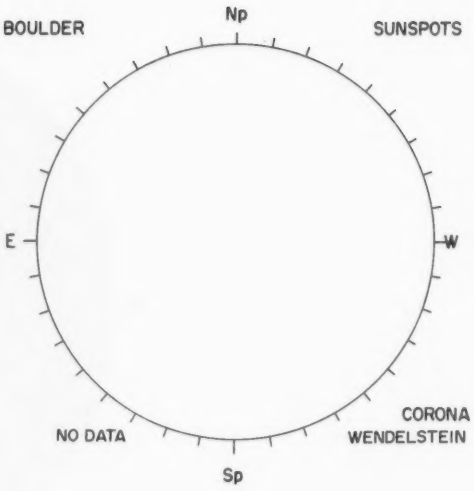
Levels
± 5
± 10
± 20
± 40
± 80

04

RAMEY AFB

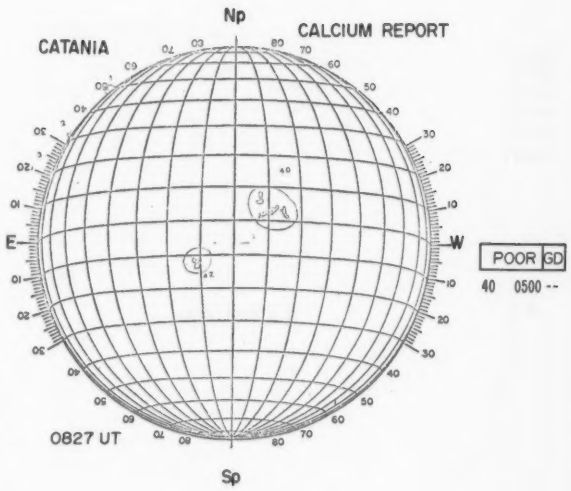


BOULDER



CATANIA

CALCIUM REPORT



POOR	GD
40	0500 --

NELC LA POSTA

Np

2.0 CM

NO DATA

E

WEATHER

W

Sp

---- UT

Ant. Temp. Unit 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E

WEATHER

W

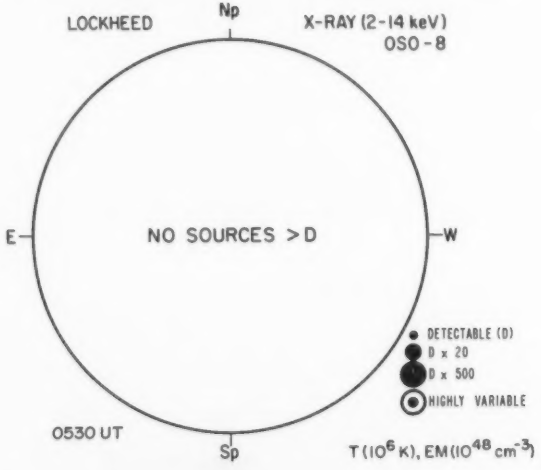
Sp

---- UT

Ant. Temp. Unit 100°K

MARCH 5, 1976 (P=-22.57, B_o=-7.25, L_o=25.84)

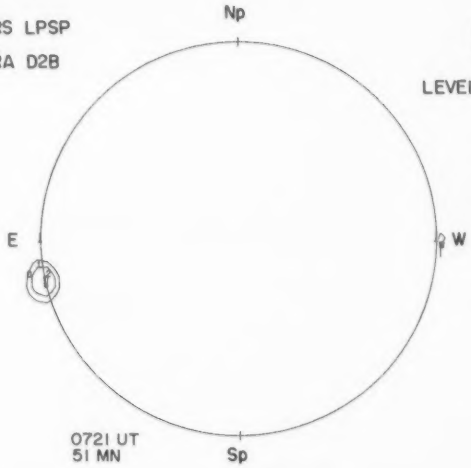
LOCKHEED X-RAY (2-14 keV) OSO-8



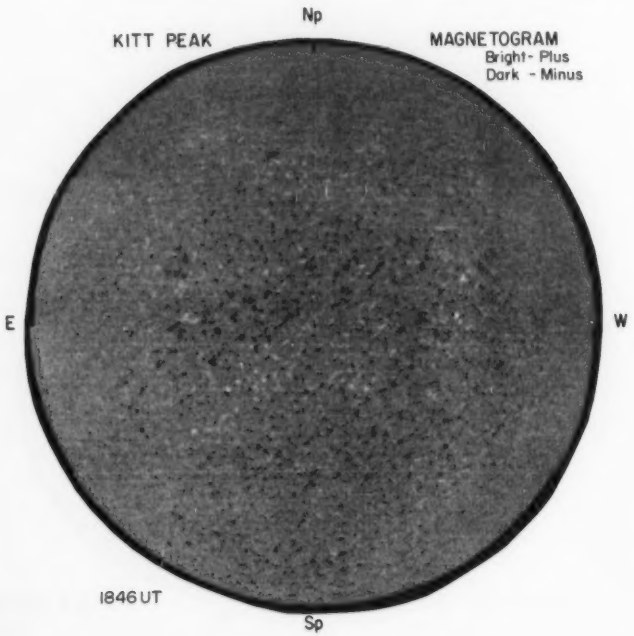
CNRS LPSP
AURA D2B

FE XV
284 A

LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640

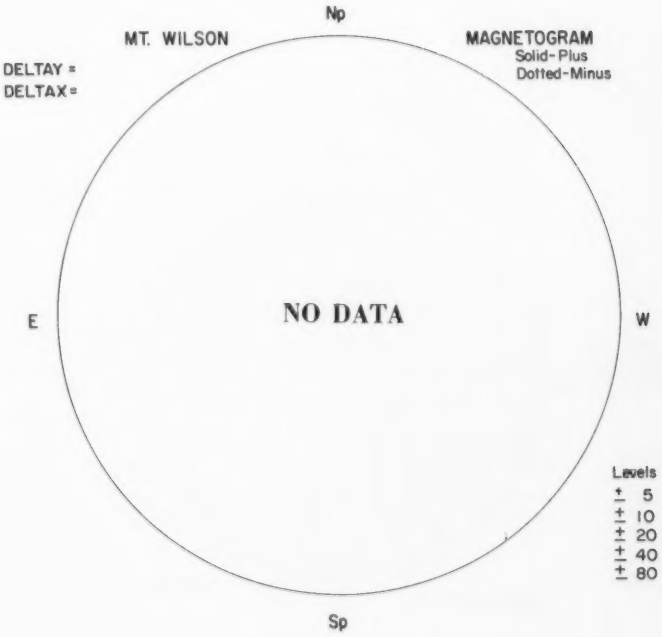


KITT PEAK MAGNETOGRAM
Bright - Plus
Dark - Minus



MT. WILSON MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

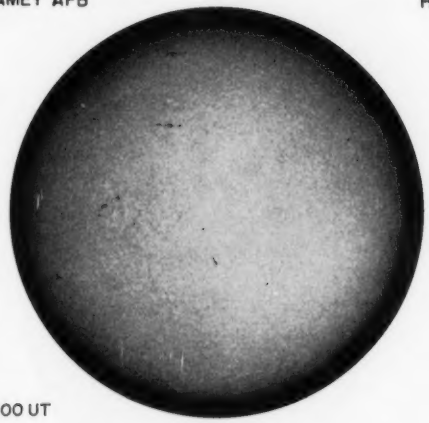


05

RAMEY AFB

Np

Hα



E

W

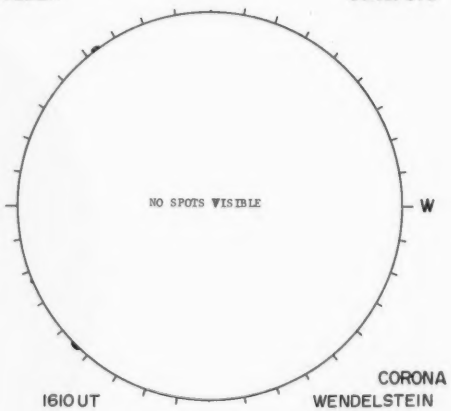
1200 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

1610 UT

Sp

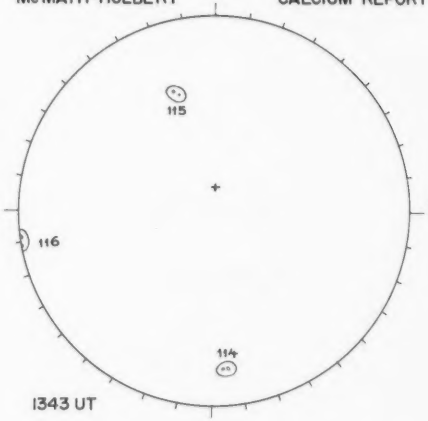
CORONA

WENDELSTEIN

McMATH-HULBERT

Np

CALCIUM REPORT



E

W

GOOD D

1343 UT

Sp

NELC LA POSTA

Np

2.0 CM

NO DATA

E

WEATHER

W

Sp

---- UT

Ant. Temp. Unit 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E

WEATHER

W

Sp

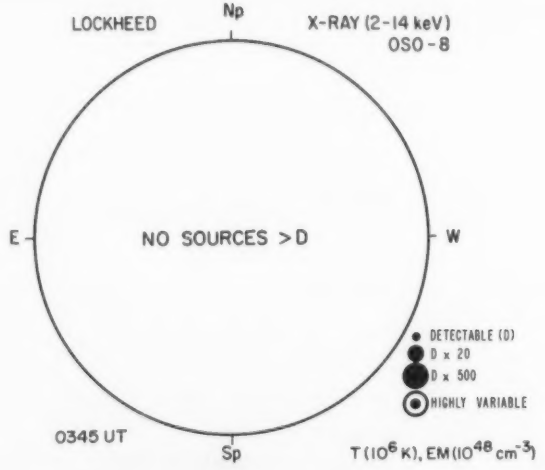
---- UT

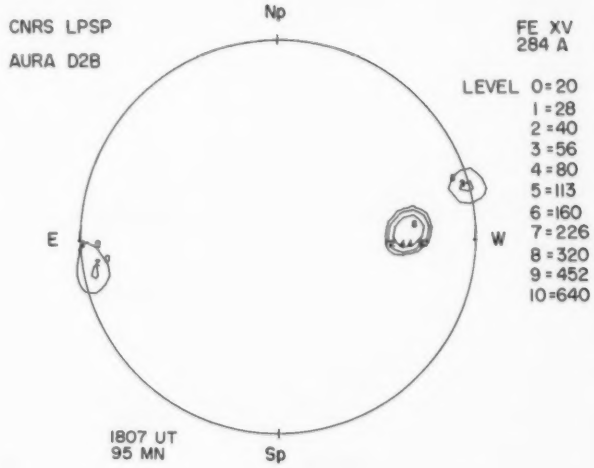
Ant. Temp. Unit 100°K

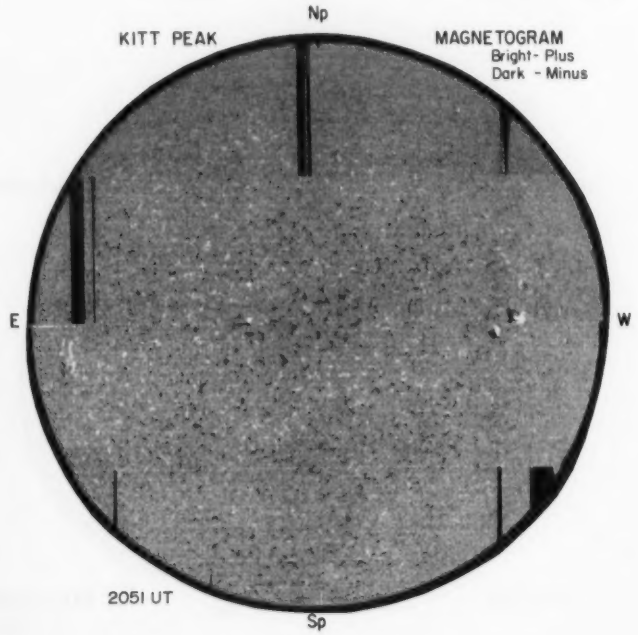
39

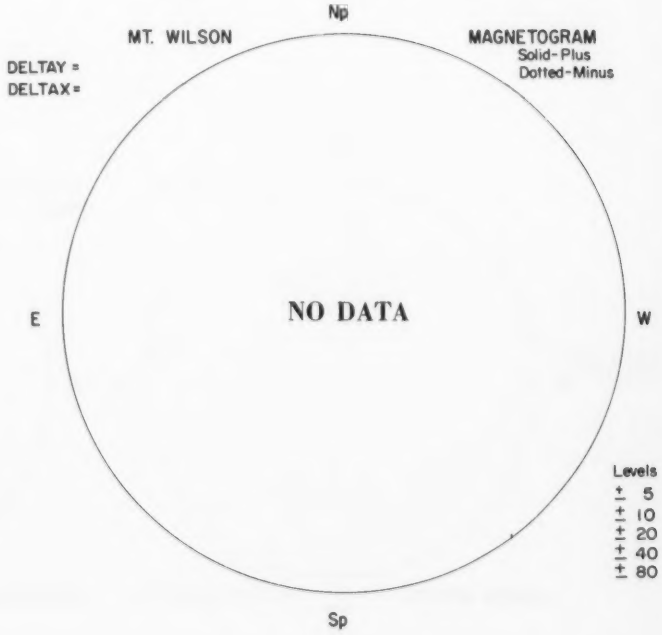
Mar 76

MARCH 6, 1976 (P=-22.79, B_o=-7.25, L_o=12.67)



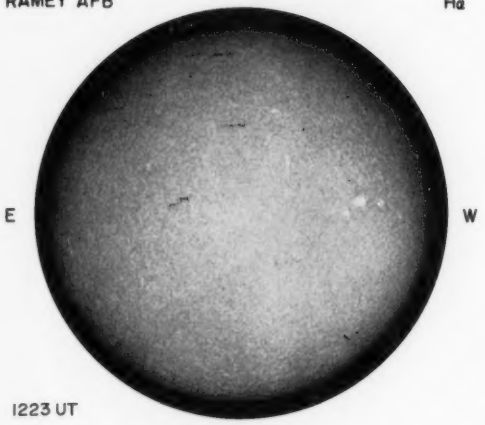






06

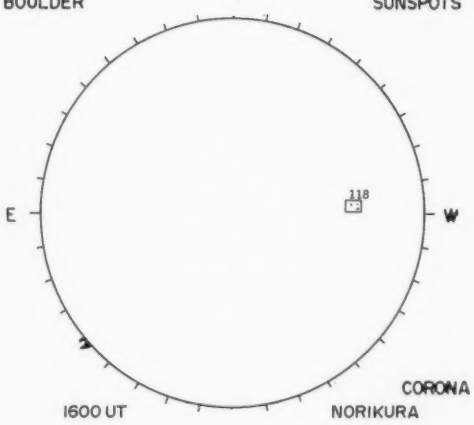
RAMEY AFB



1223 UT

Hα

BOULDER



1600 UT

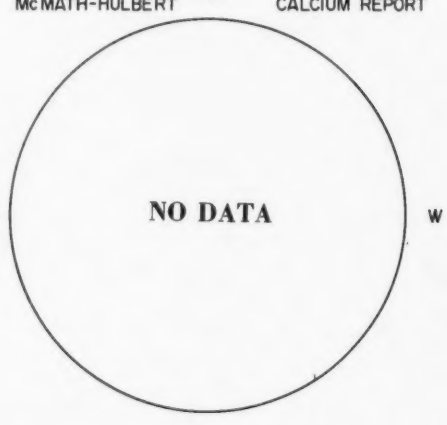
SUNSPOTS

CORONA

NORIKURA

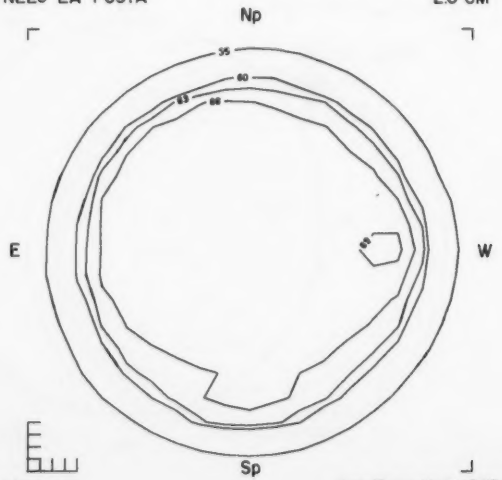
McMATH-HULBERT

CALCIUM REPORT



NELC LA POSTA

2.0 CM

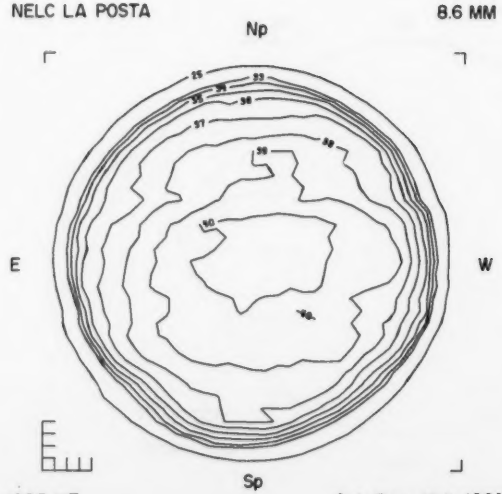


2058 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

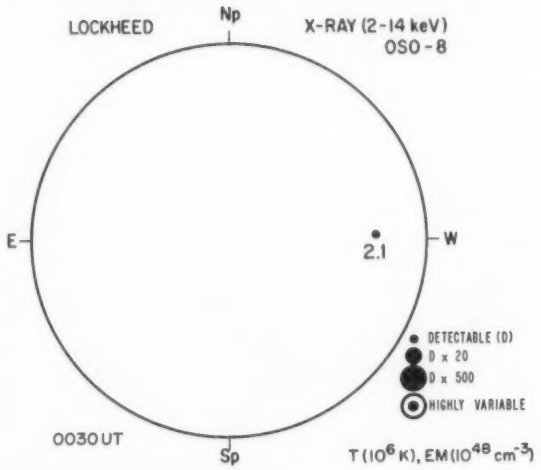
8.6 MM

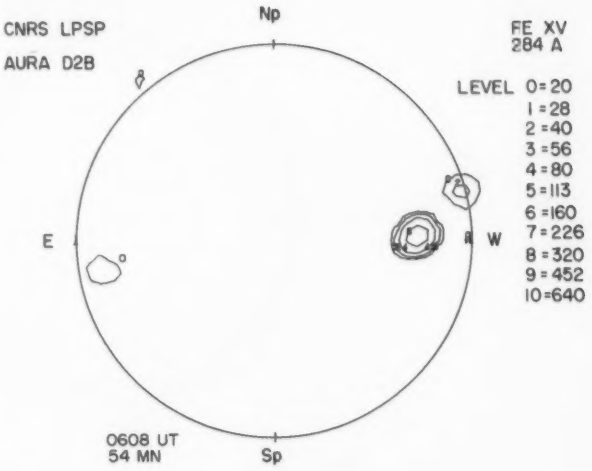


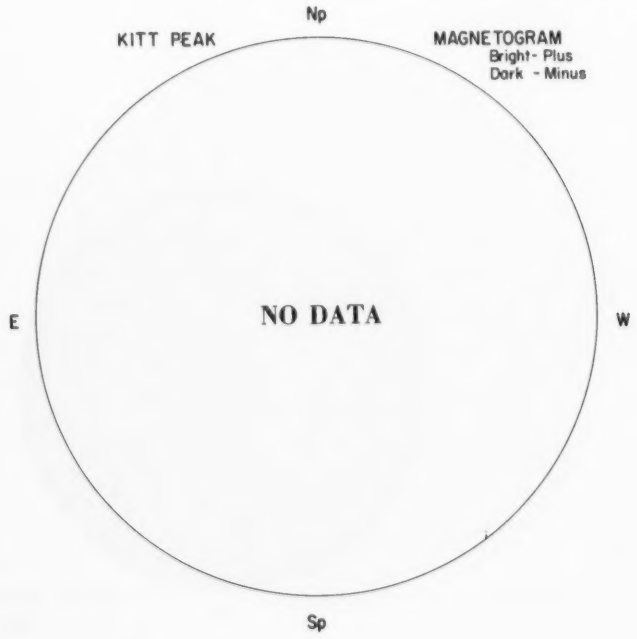
1925 UT

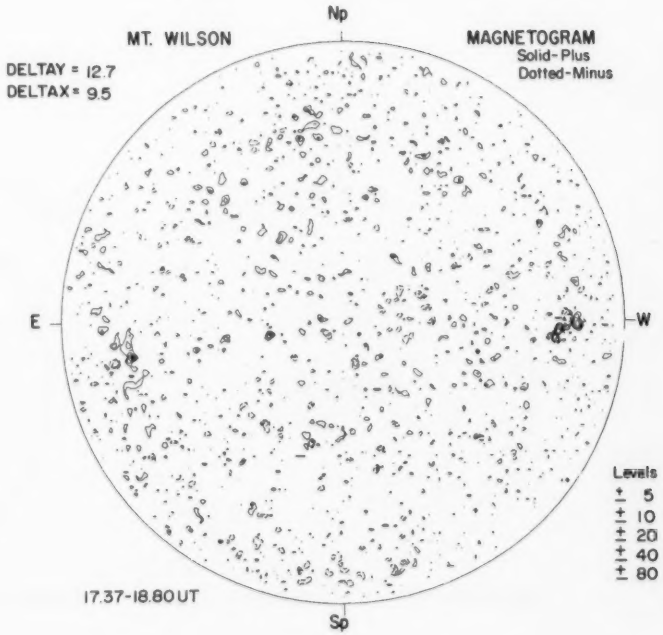
Ant. Temp. Unit 100°K

MARCH 7, 1976 (P = -23.01, B_0 = -7.25, L_0 = 359.49)



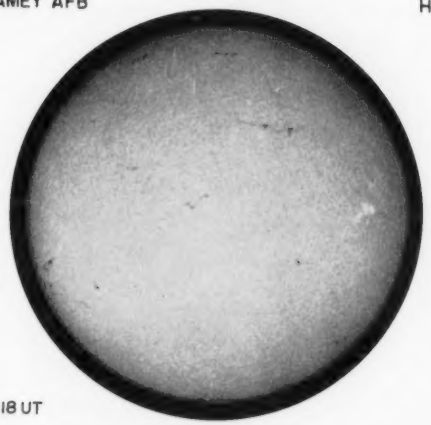






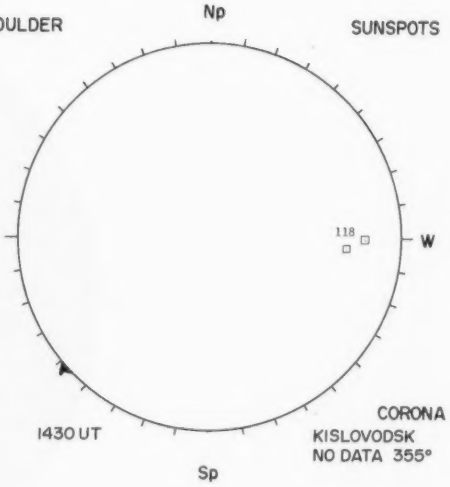
07

RAMEY AFB



1218 UT

Hα BOULDER



1430 UT

SUNSPOTS

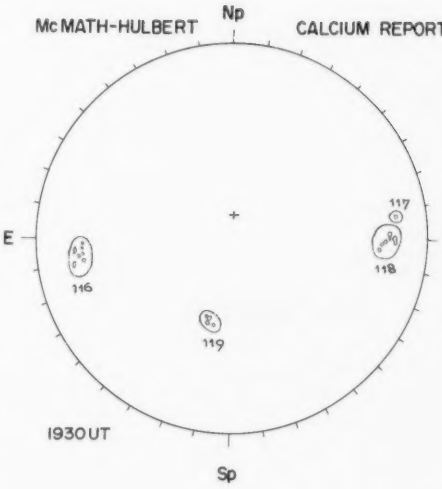
CORONA

KISLOVODSK

NO DATA 355°

McMATH-HULBERT

CALCIUM REPORT



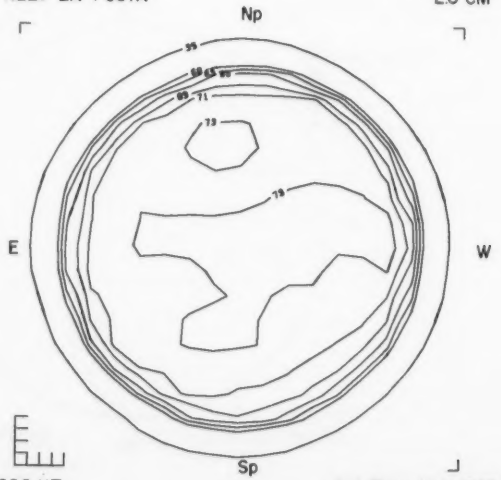
1930 UT

FAIR M

18 0500 2.5

NELC LA POSTA

2.0 CM

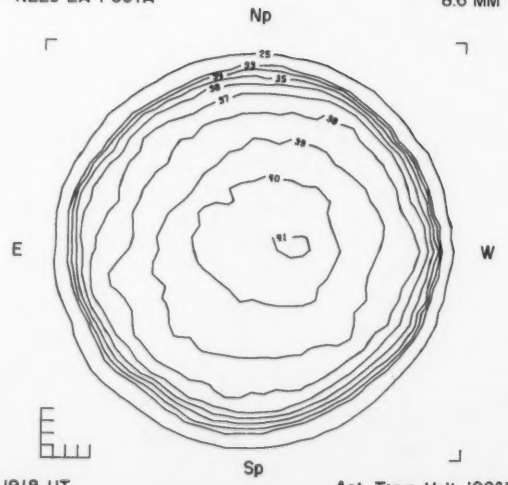


1826 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

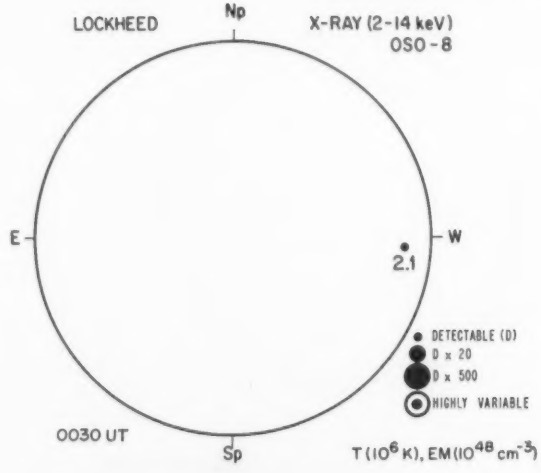
8.6 MM

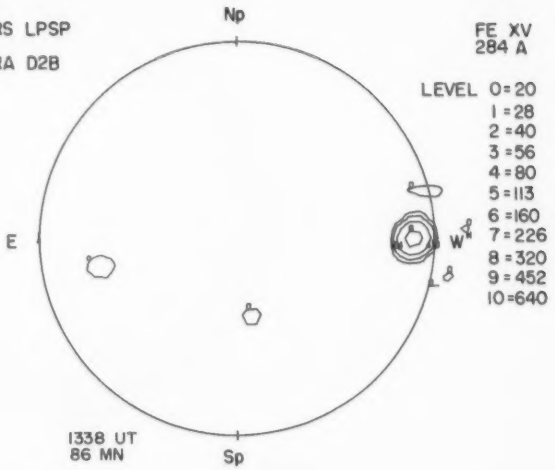


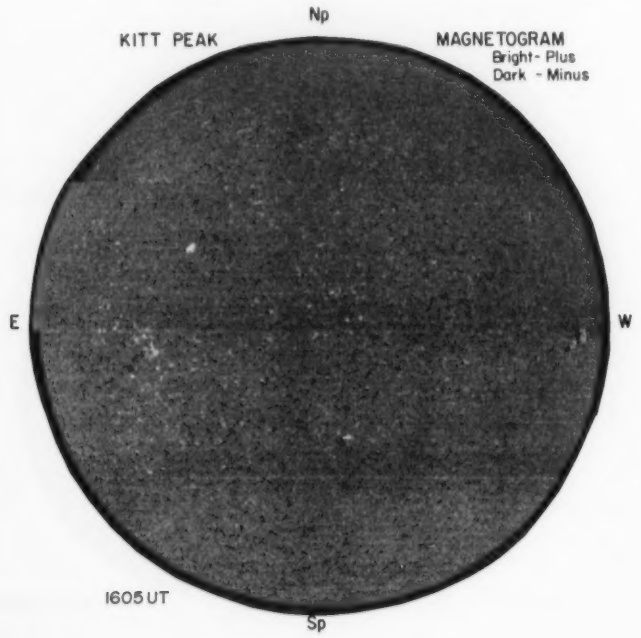
1918 UT

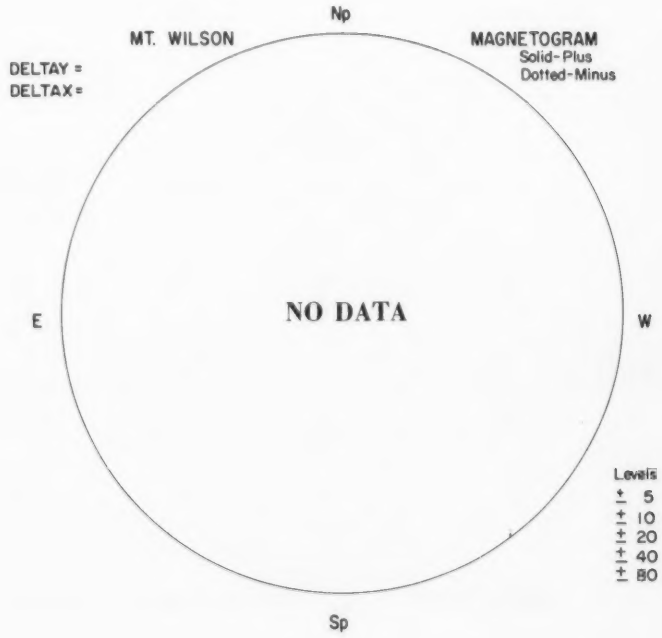
Ant. Temp. Unit 100°K

MARCH 8, 1976 (P = -23.22, B_0 = -7.25, L_0 = 346.31)



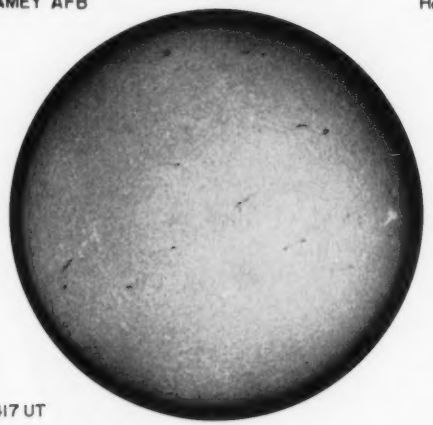






08

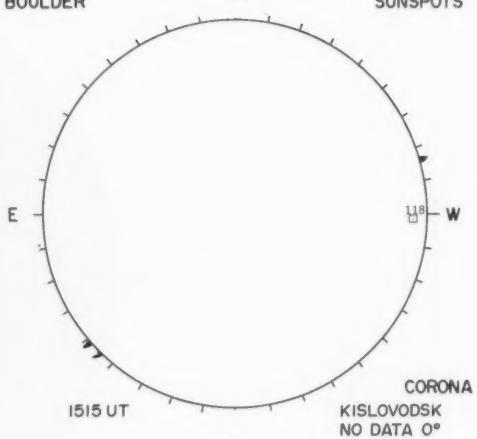
RAMEY AFB



1417 UT

Hα

BOULDER



1515 UT

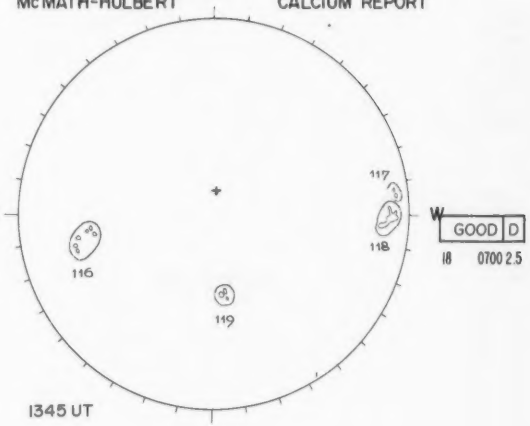
SUNSPOTS

CORONA

KISLOVODSK

NO DATA 0°

McMATH-HULBERT



1345 UT

CALCIUM REPORT

GOOD D

18 0700 2.5

NELC LA POSTA

Np

2.0 CM

NO DATA

E WEATHER W

Sp

---- UT

Ant. Temp. Unit 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E WEATHER W

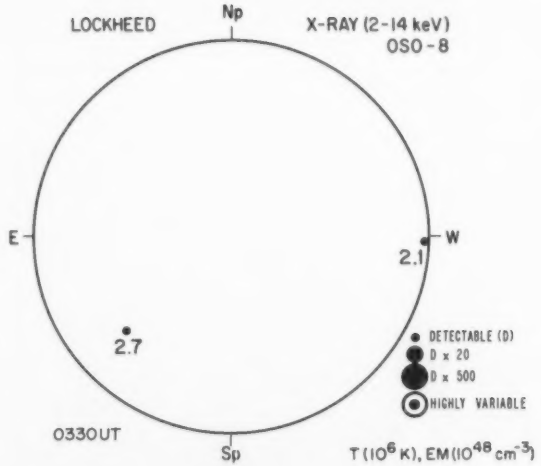
Sp

---- UT

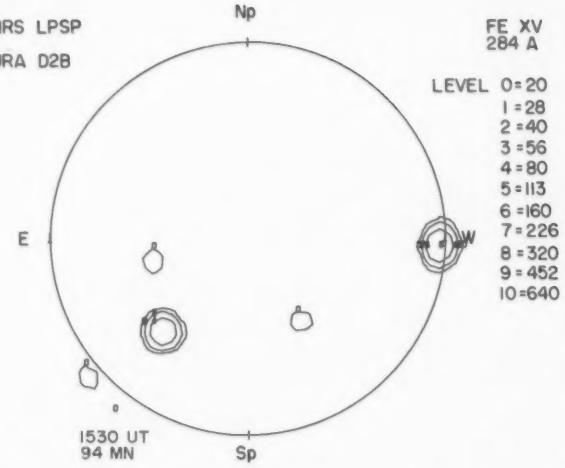
Ant. Temp. Unit 100°K

MARCH 9, 1976 (P =-23.42, B_0 =-7.24, L_0 =333.14)

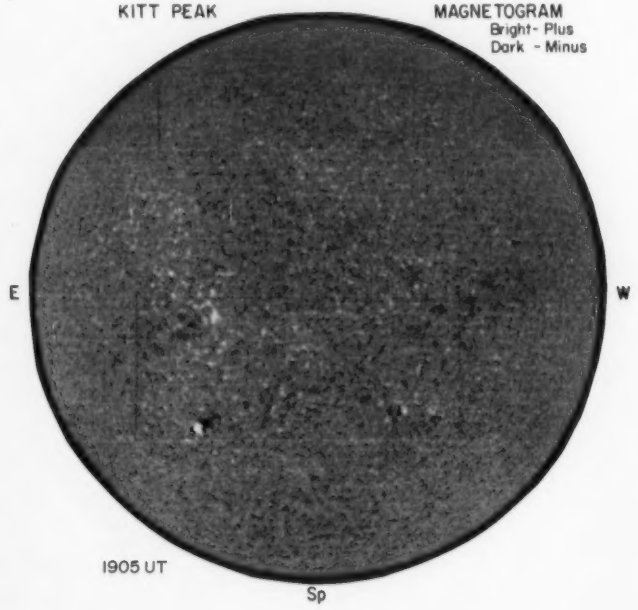
LOCKHEED X-RAY (2-14 keV) OSO-8



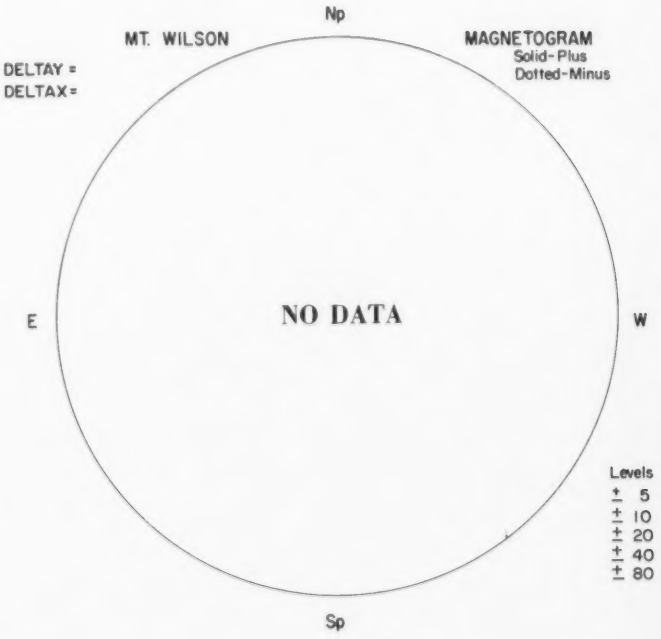
CNRS LPSP FE XV 284 A
AURA D2B



KITT PEAK MAGNETOGRAM
Bright - Plus
Dark - Minus

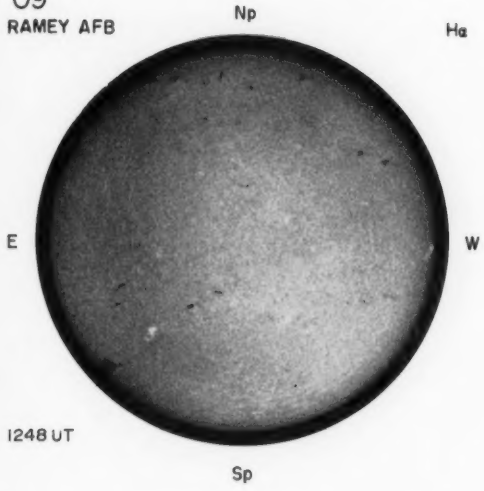


MT. WILSON MAGNETOGRAM
Solid - Plus
Dotted - Minus
DELTAY =
DELTAX =



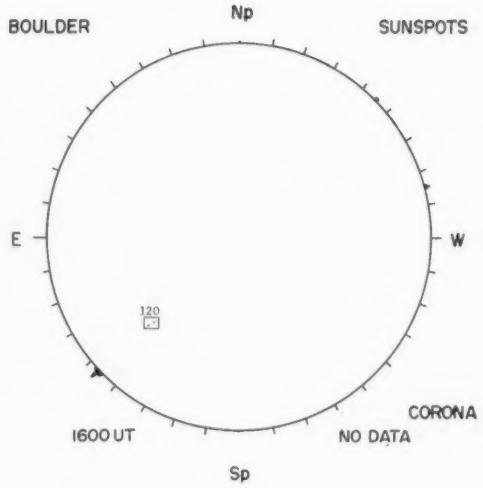
09

RAMEY AFB



1248 UT

Hα BOULDER



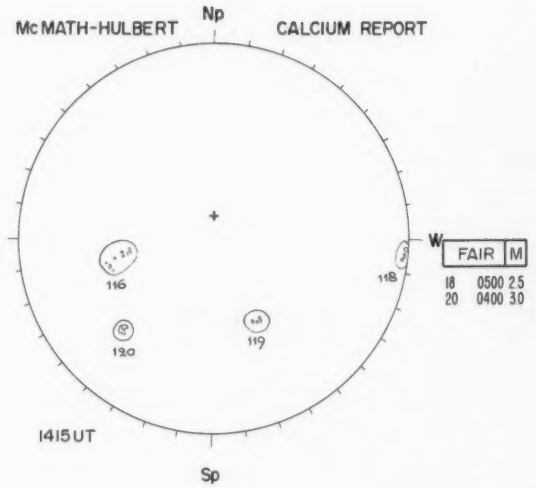
1600 UT

SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT



1415 UT

CALCIUM REPORT

	FAIR	M
18	0500	2.5
20	0400	3.0

NELC LA POSTA

Np

2.0 CM

NO DATA

E

WEATHER

W

---- UT

Sp

Ant. Temp. Unit 100° K

NELC LA POSTA

Np

8.6 MM

NO DATA

E

WEATHER

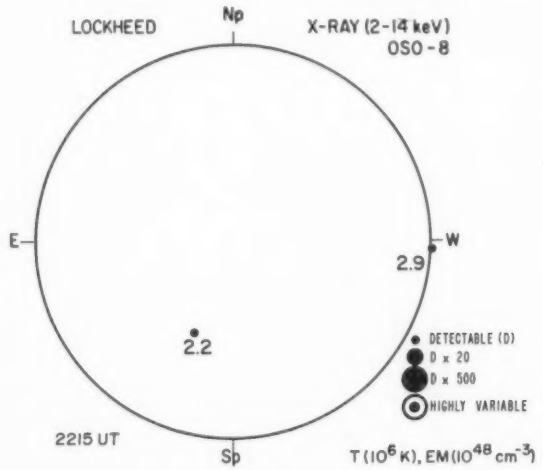
W

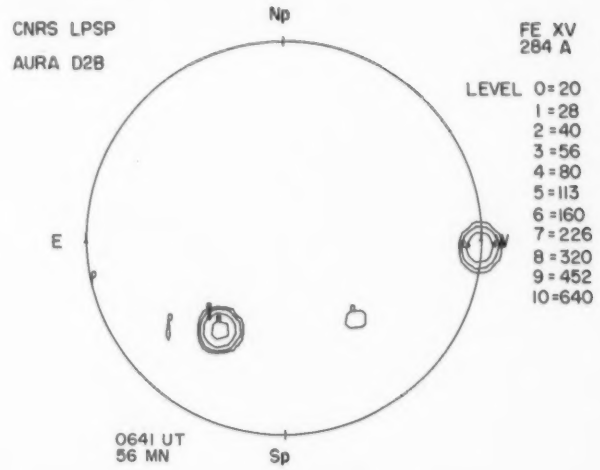
---- UT

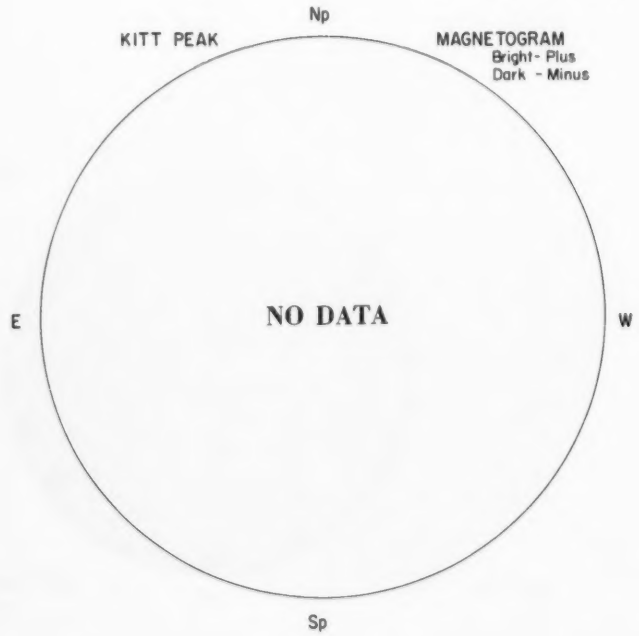
Sp

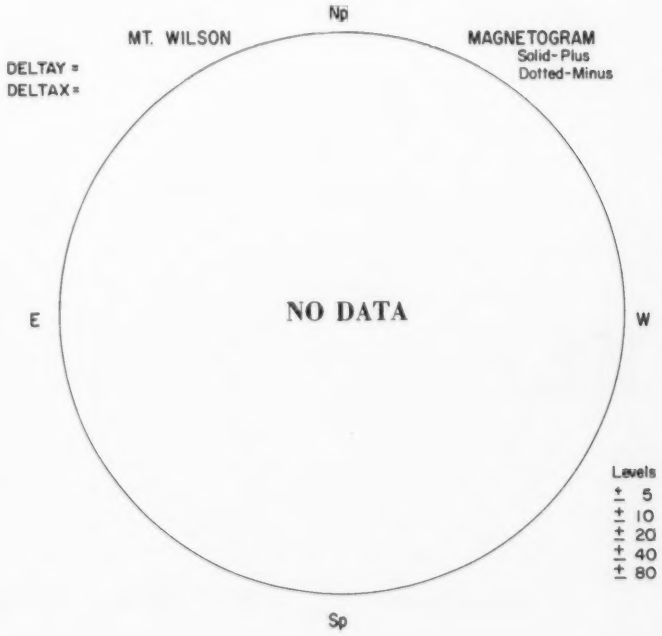
Ant. Temp. Unit 100° K

MARCH 10, 1976 (P = -23.62, B_0 = -7.23, L_0 = 319.96)



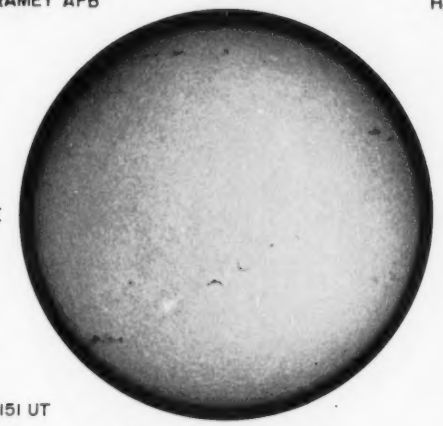






10

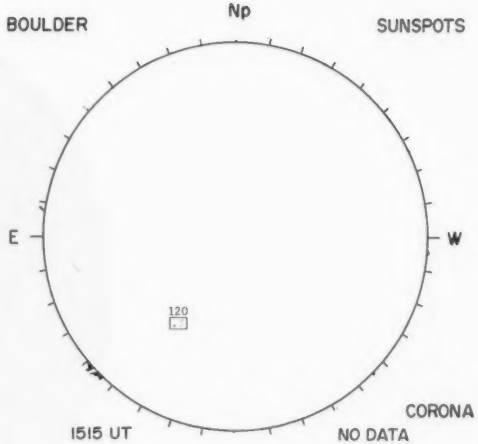
RAMEY AFB



1151 UT

Hα

BOULDER



1515 UT

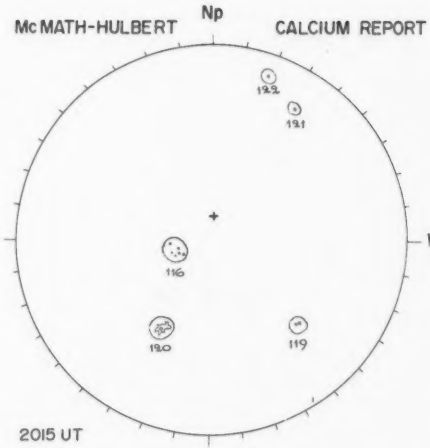
SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT

CALCIUM REPORT



2015 UT

FAIR M

20 0500 2.5

NELC LA POSTA

Np

2.0 CM

NO DATA

E

WEATHER

W

Sp

---- UT

Ant. Temp. Unit 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E

WEATHER

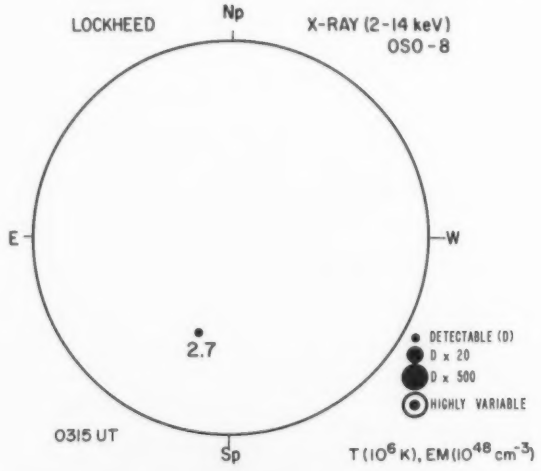
W

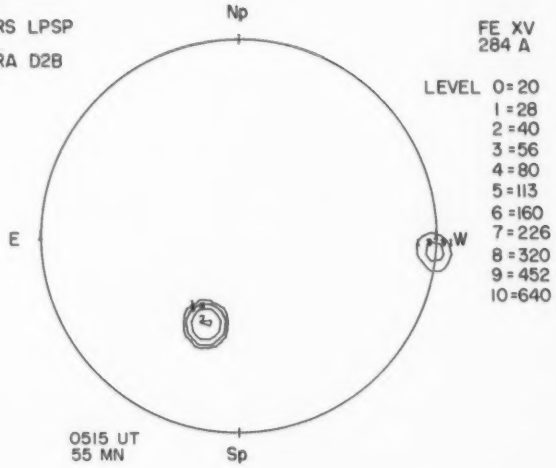
Sp

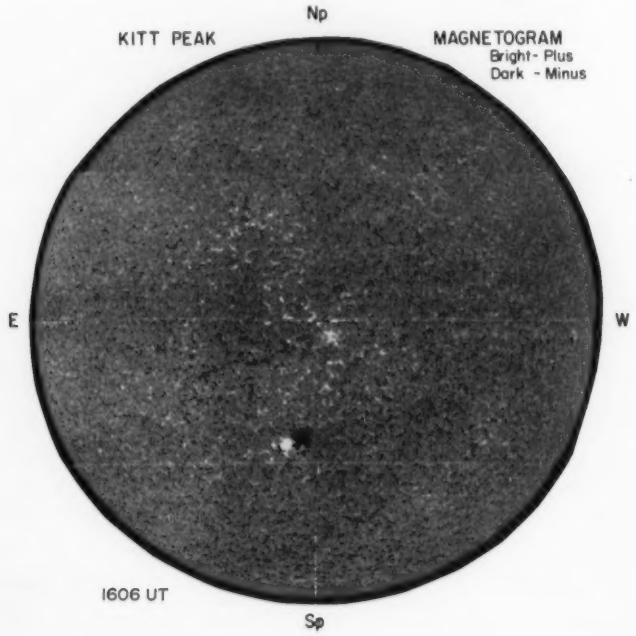
---- UT

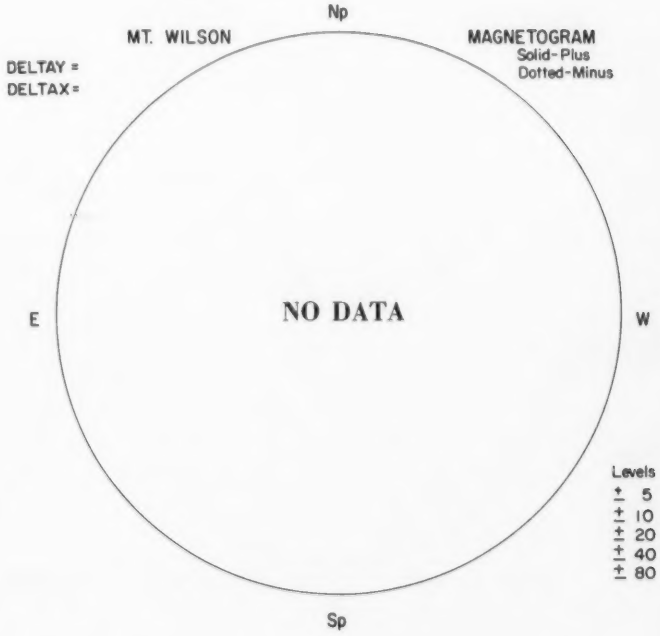
Ant. Temp. Unit 100°K

MARCH 11, 1976 (P = -23.81, B_0 = -7.22, L_0 = 306.78)





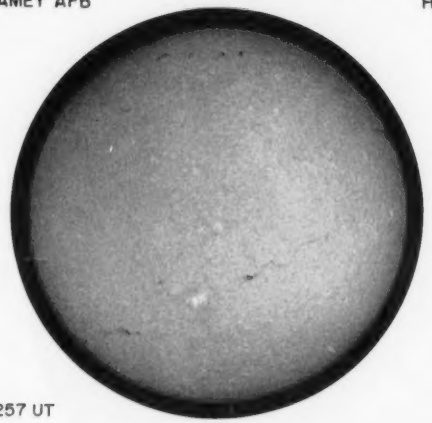




RAMEY AFB

Np

Hα



E

W

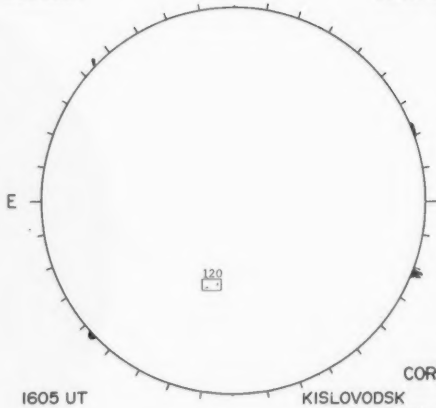
Sp

1257 UT

BOULDER

Np

SUNSPOTS



E

W

Sp

1605 UT

CORONA

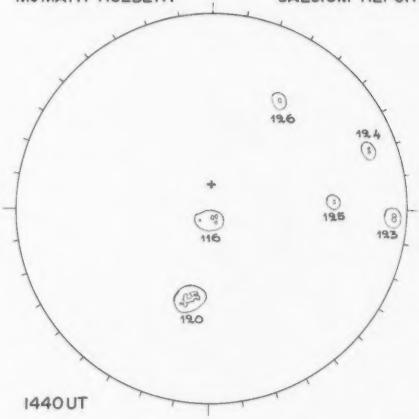
KISLOVODSK

NO DATA 185°, 295°, 345°-355°

McMATH-HULBERT

Np

CALCIUM REPORT



E

W

Sp

1440 UT

FAIR | M

20 0600 3.0

NELC LA POSTA

Np

2.0 CM

NO DATA

E

WEATHER

W

Sp

---- UT

Ant Temp Unit 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E

WEATHER

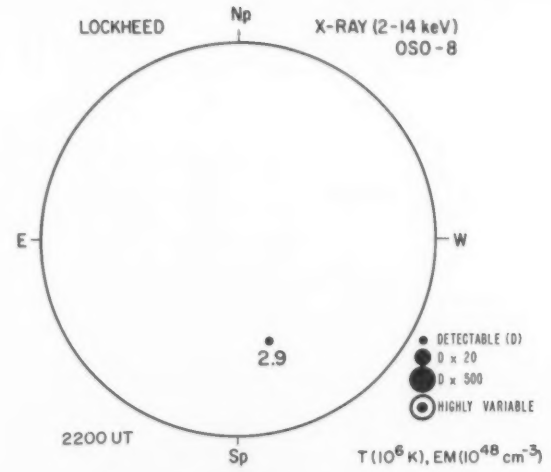
W

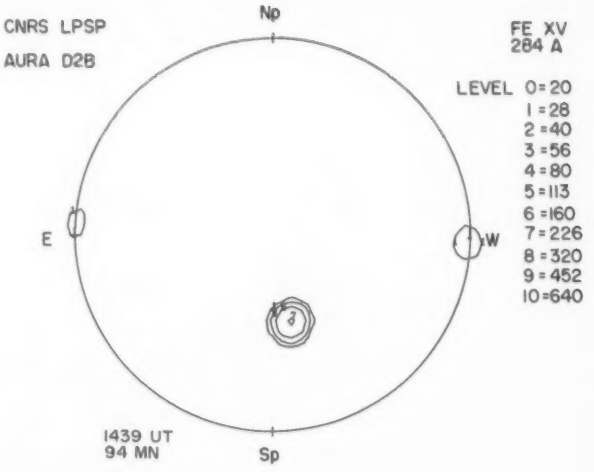
Sp

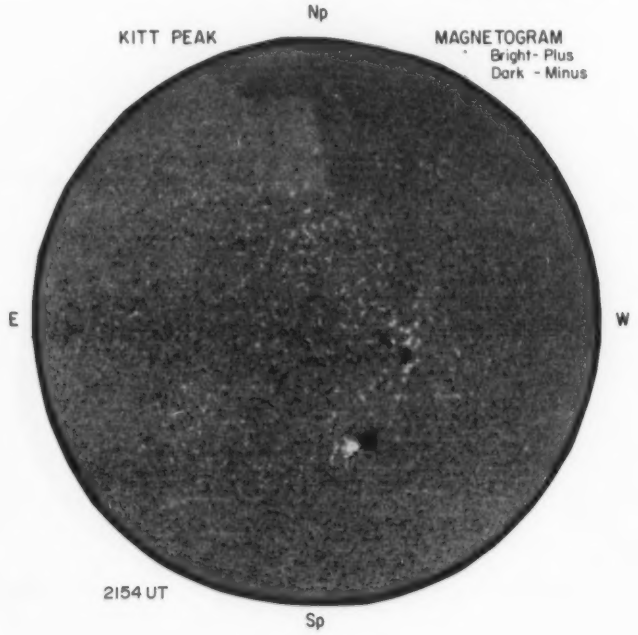
---- UT

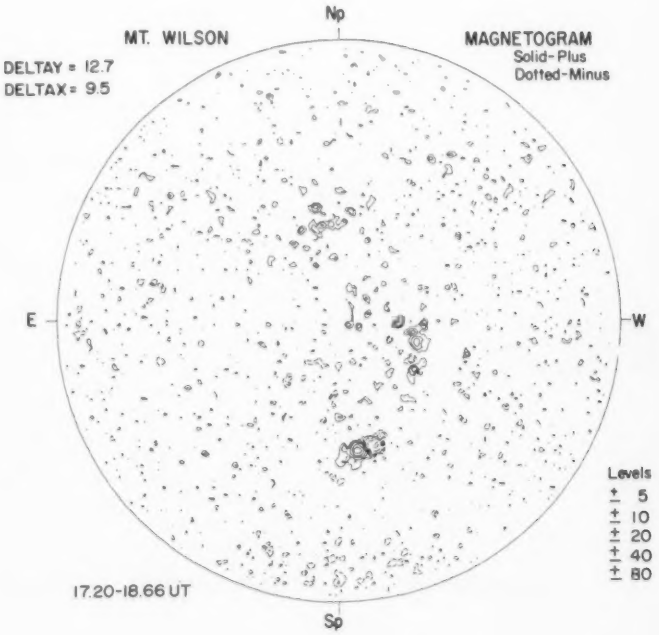
Ant. Temp. Unit 100°K

MARCH 12, 1976 (P = -23.99, B_0 = -7.21, L_0 = 293.60)



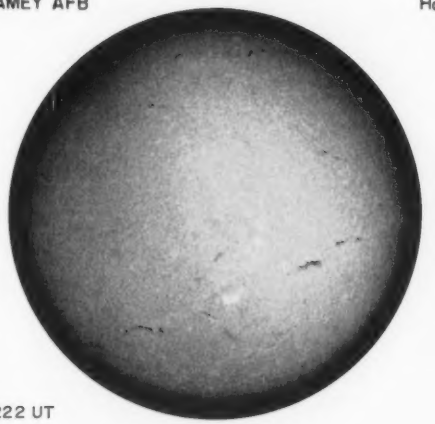






12

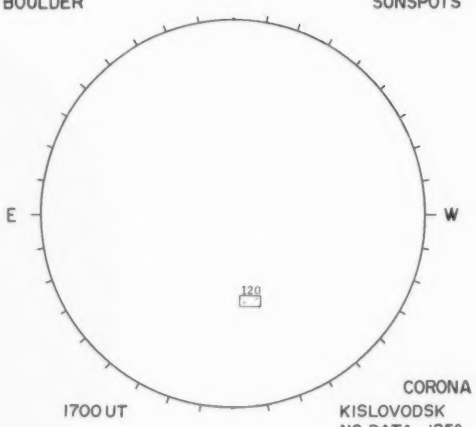
RAMEY AFB



Hα

1222 UT

BOULDER



1700 UT

SUNSPOTS

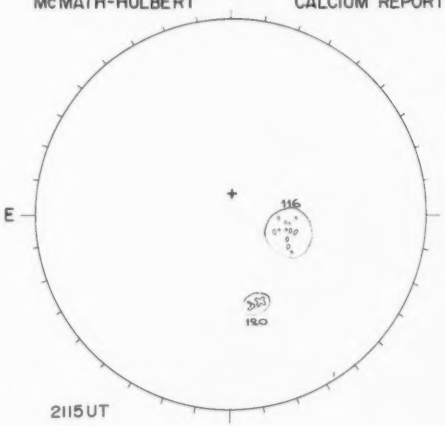
CORONA

KISLOVODSK

NO DATA 185°,

285°-330°

McMATH-HULBERT



2115 UT

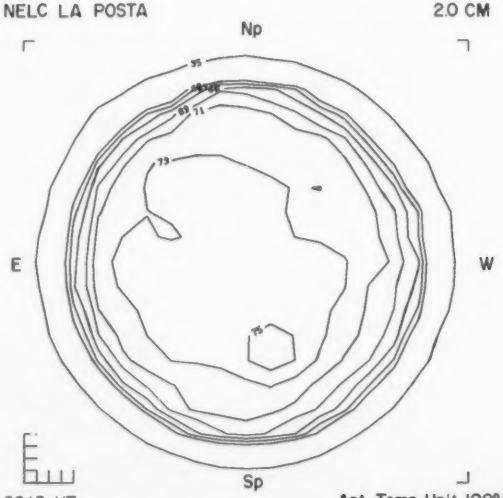
CALCIUM REPORT

FAIR | M

20 0500 30

NELC LA POSTA

2.0 CM

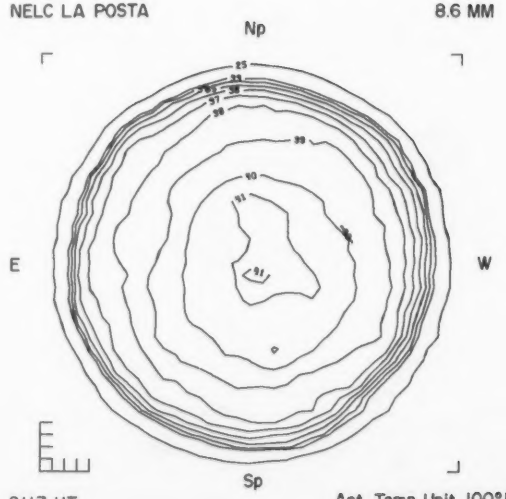


2012 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

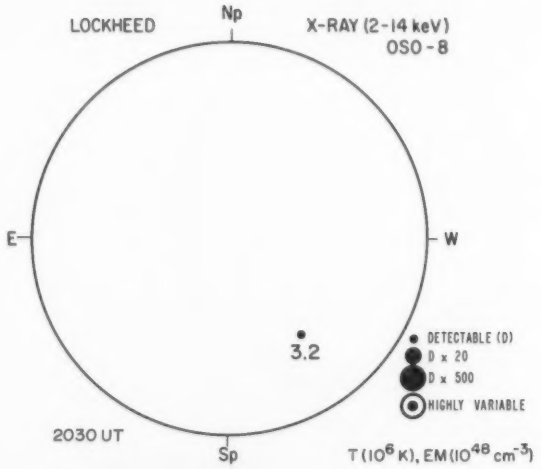
8.6 MM

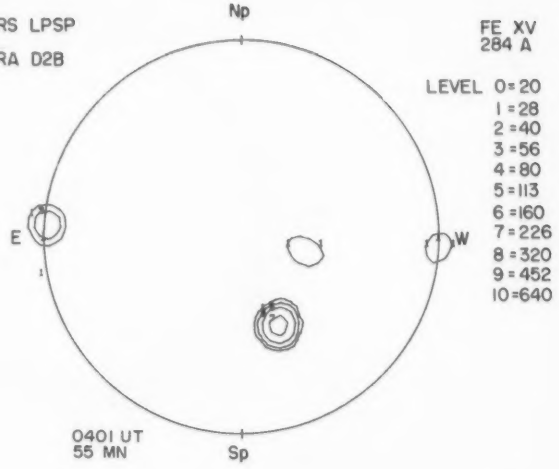


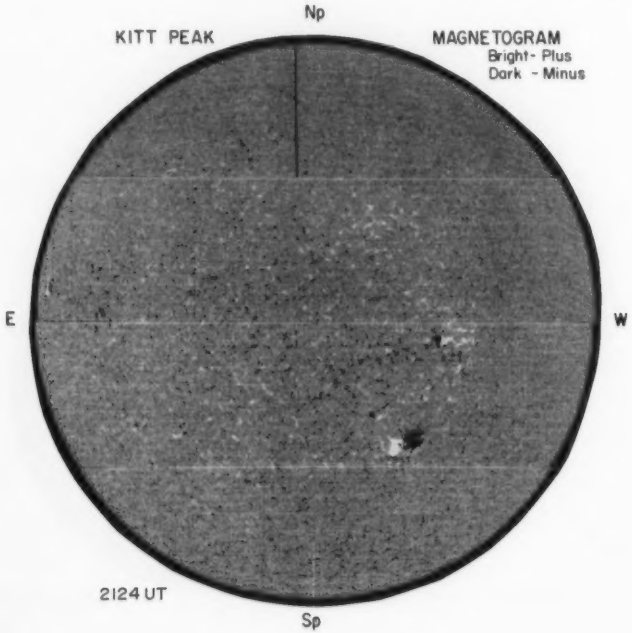
2117 UT

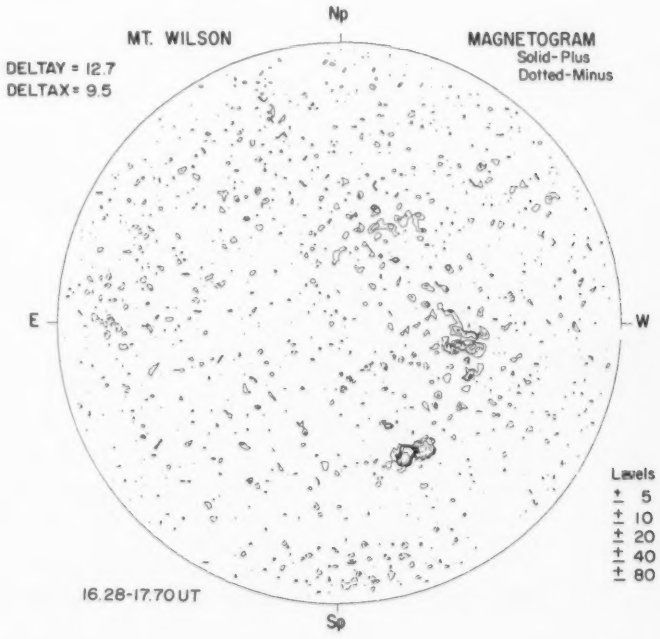
Ant. Temp. Unit 100°K

MARCH 13, 1976 (P = -24.17, B_o = -7.19, L_o = 280.42)









13

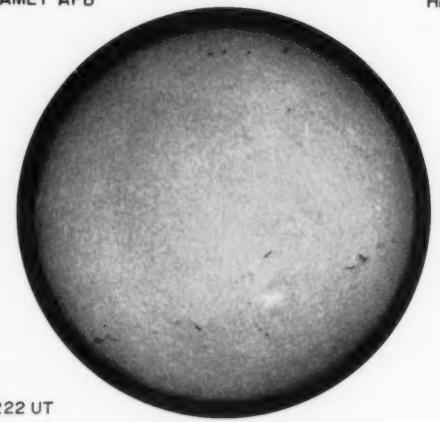
RAMEY AFB

Np

Hα

E

W



1222 UT

Sp

BOULDER

Np

SUNSPOTS

E

W

120

1600 UT

CORONA

NORIKURA

Sp

McMATH-HULBERT

Np

CALCIUM REPORT

E

W

192

116

120

V POOR M

20 0500 3.0

1415 UT

Sp

NELC LA POSTA

Np

2.0 CM

NO DATA

E

EQUIPMENT

W

---- UT

Sp

Ant. Temp. Unit 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E

EQUIPMENT

W

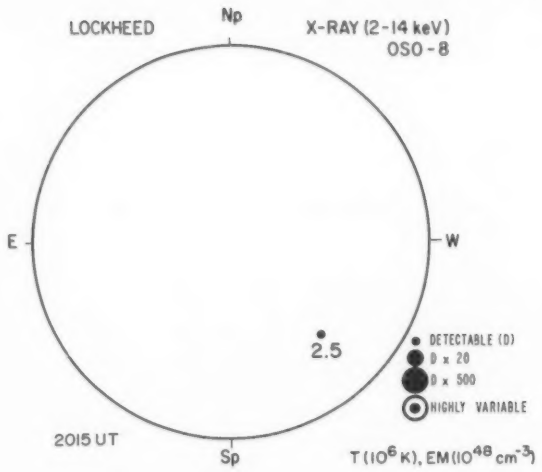
---- UT

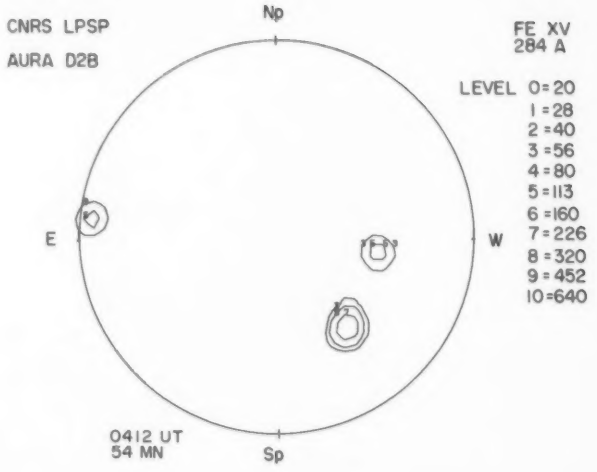
Sp

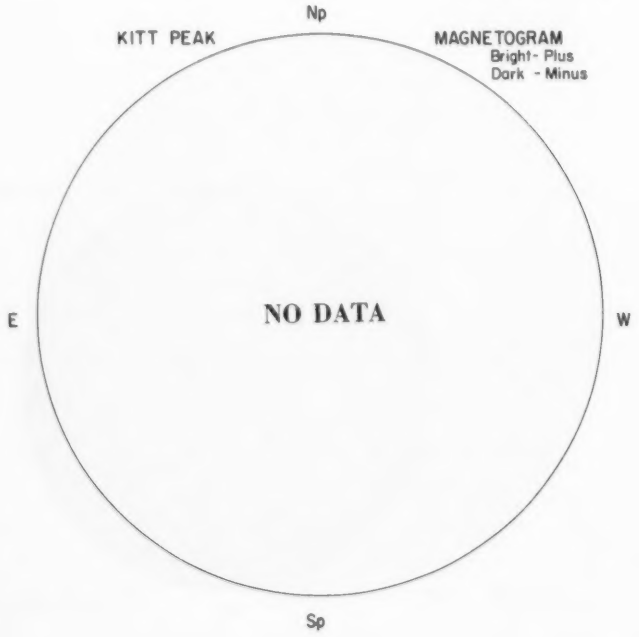
Ant. Temp. Unit 100°K

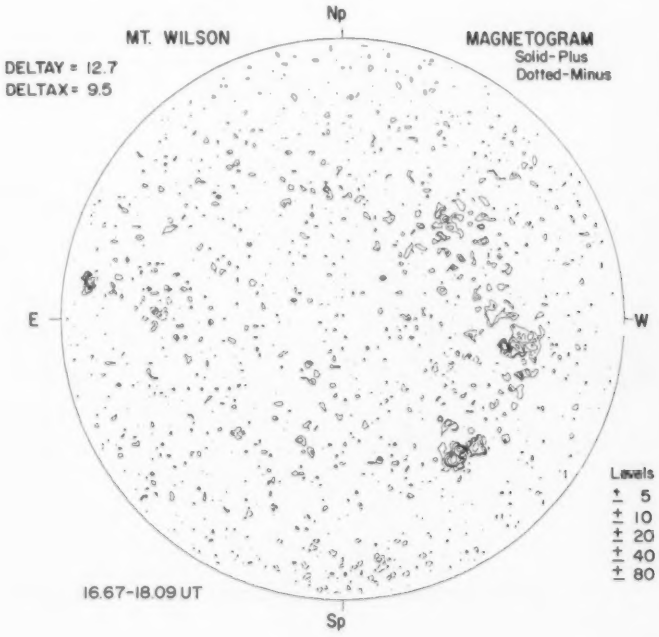
55
Mar 76

MARCH 14, 1976 (P = -24.34, B_o = -7.18, L_o = 267.24)



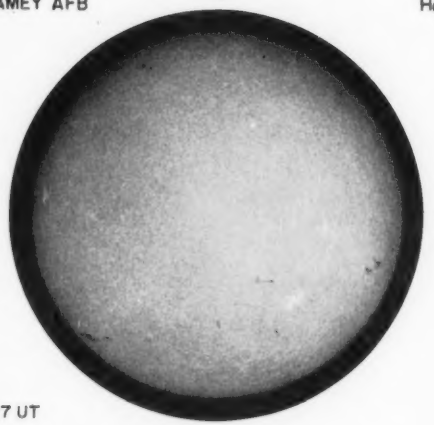






14

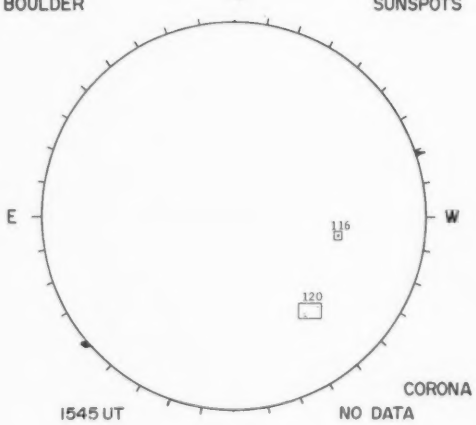
RAMEY AFB



Hα

1217 UT

BOULDER



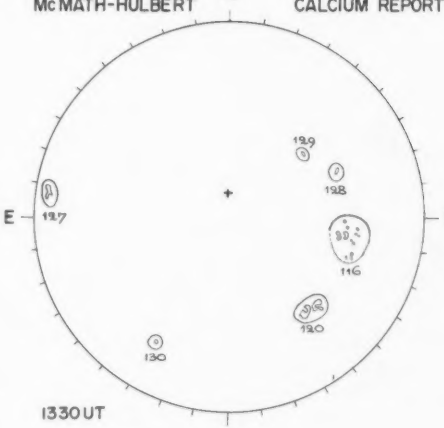
SUNSPOTS

1545 UT

CORONA

NO DATA

McMATH-HULBERT



CALCIUM REPORT

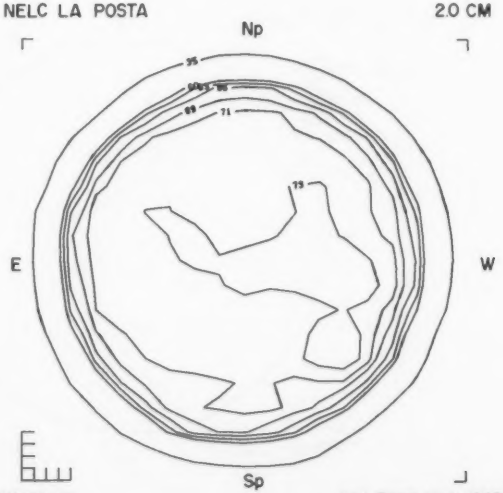
1330 UT

GOOD | D

20 0700 3.0

NELC LA POSTA

2.0 CM

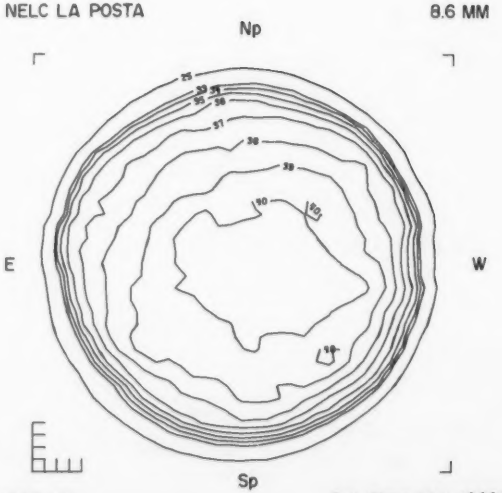


2003 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

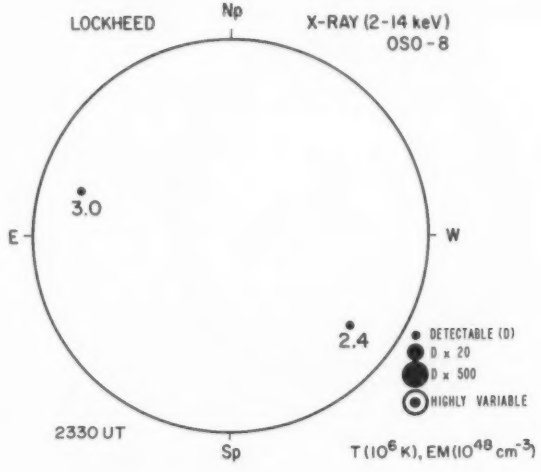
8.6 MM

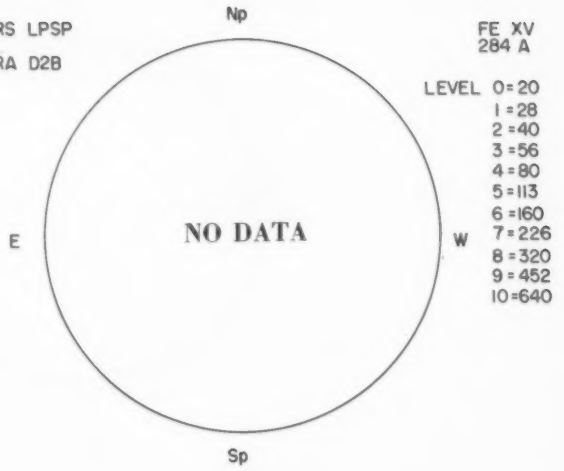


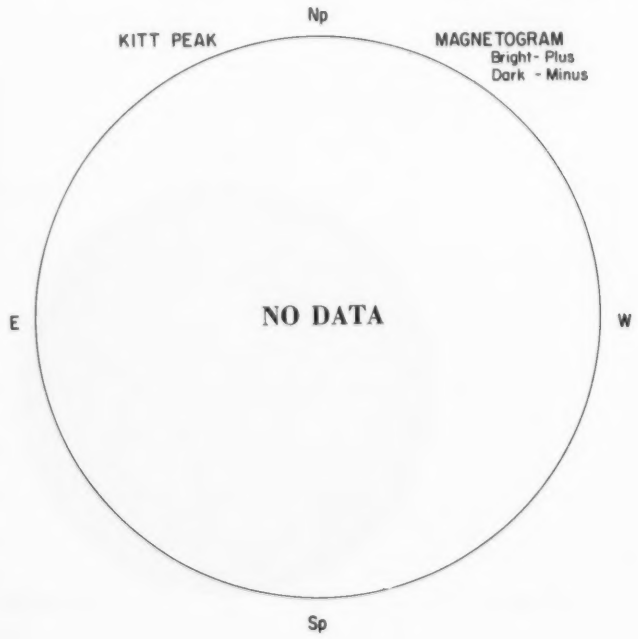
1834 UT

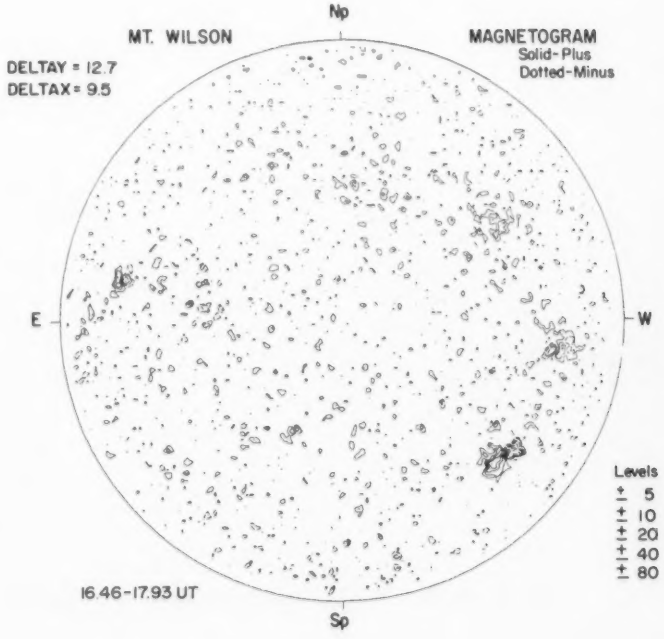
Ant. Temp. Unit 100°K

MARCH 15, 1976 (P =-24.50, B_0 =-7.16, L_0 =254.06)



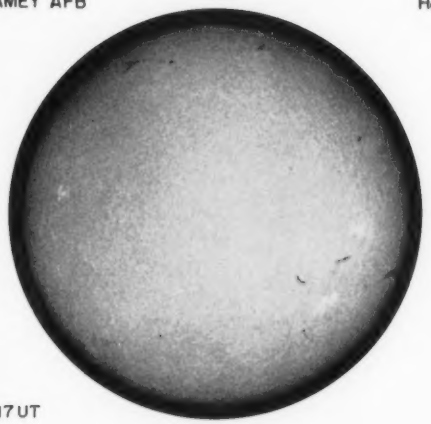






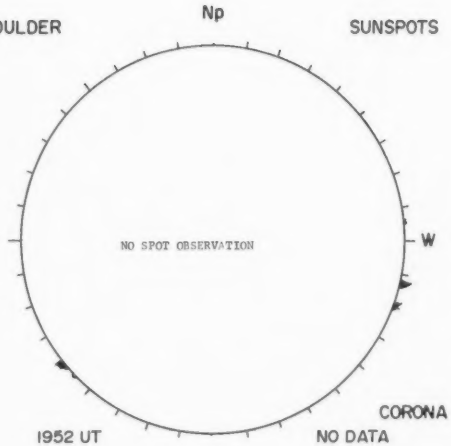
15

RAMEY AFB



1217 UT

Hα BOULDER



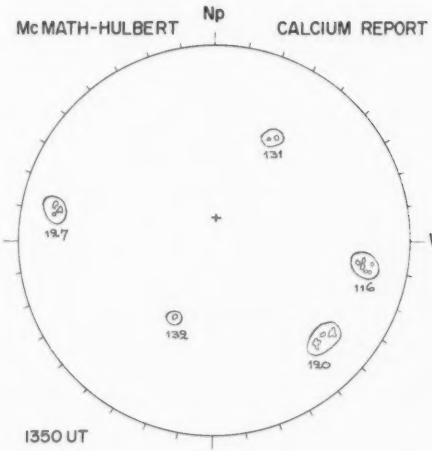
1952 UT

SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT



1350 UT

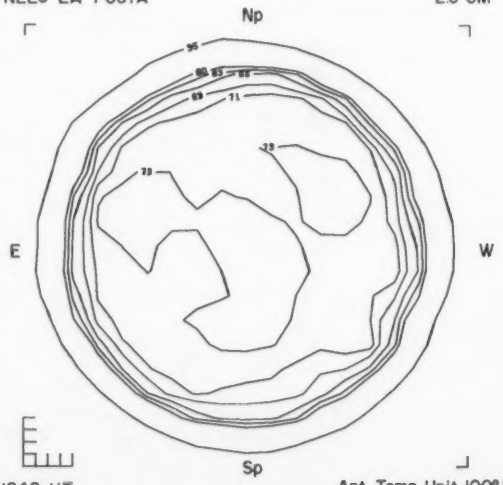
CALCIUM REPORT

FAIR | D

20 0600 3.0

NELC LA POSTA

2.0 CM

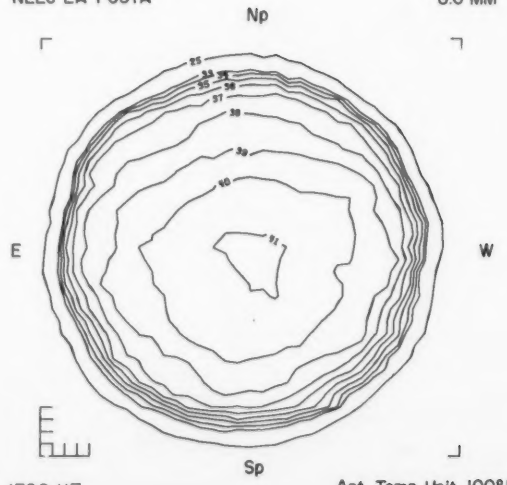


1848 UT

Ant Temp Unit 100°K

NELC LA POSTA

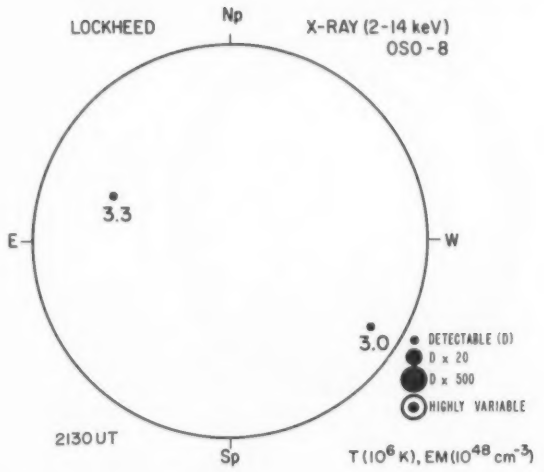
8.6 MM

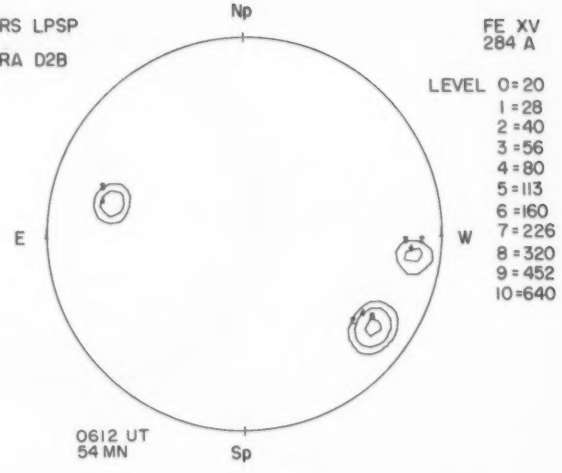


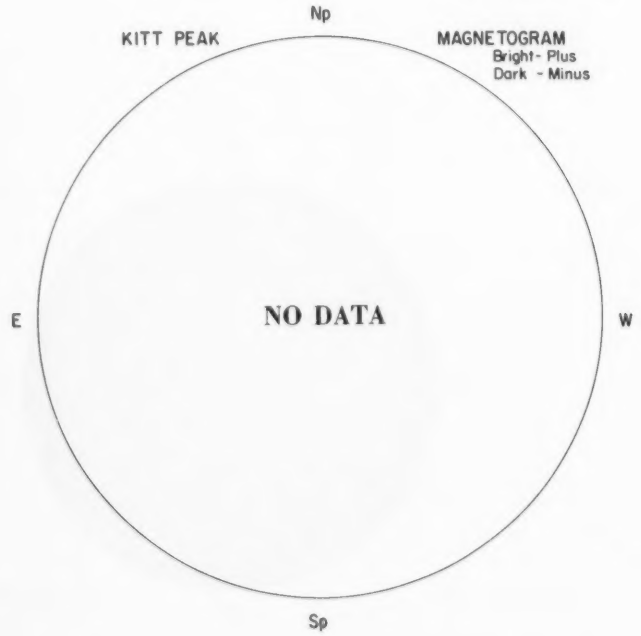
1728 UT

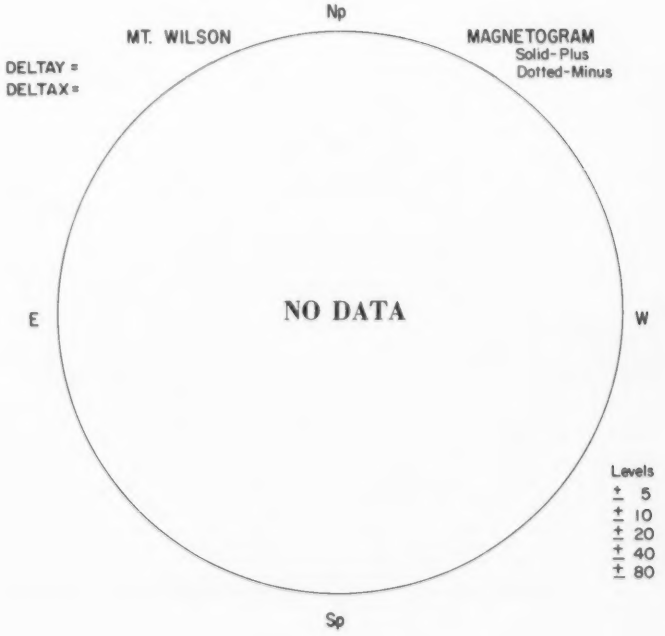
Ant. Temp. Unit 100°K

MARCH 16, 1976 (P = -24.66, B_0 = -7.14, L_0 = 240.88)



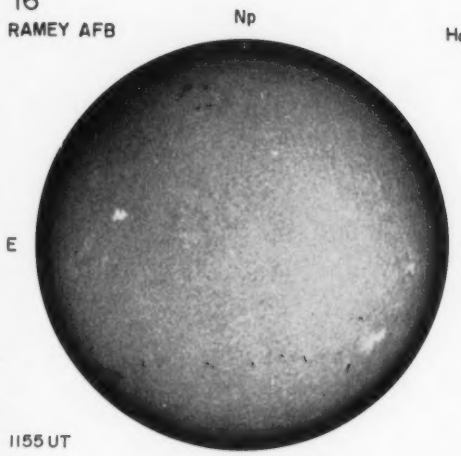






16

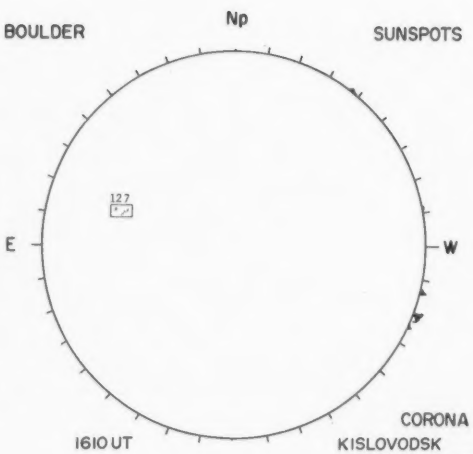
RAMEY AFB



1155 UT

Hα

BOULDER



1610 UT

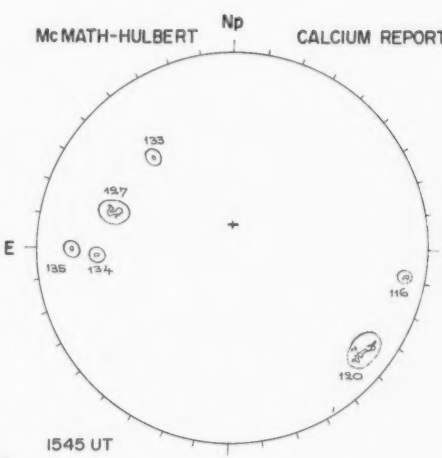
SUNSPOTS

CORONA

KISLOVODSK

NO DATA 0°-200°, 340°

McMATH-HULBERT



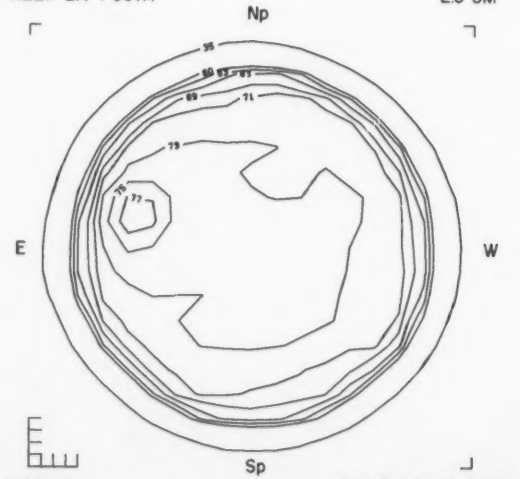
1545 UT

CALCIUM REPORT

	POOR	M
20	0700	2.5
27	0500	3.5

NELC LA POSTA

2.0 CM

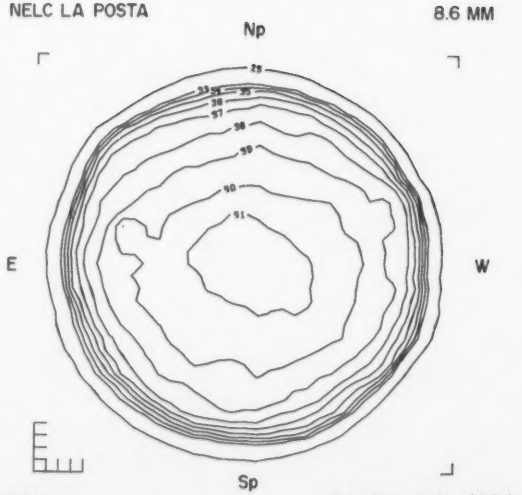


1858 UT

Ant Temp Unit 100°K

NELC LA POSTA

8.6 MM

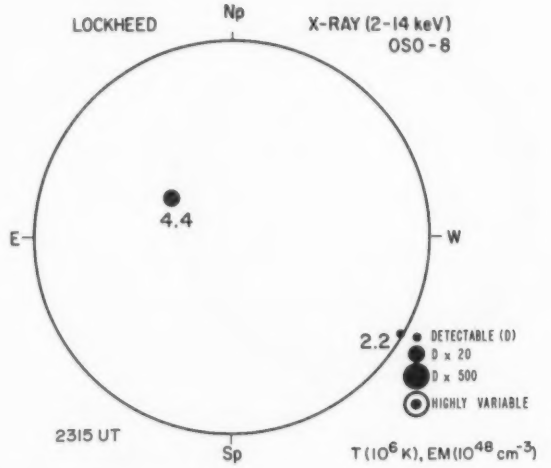


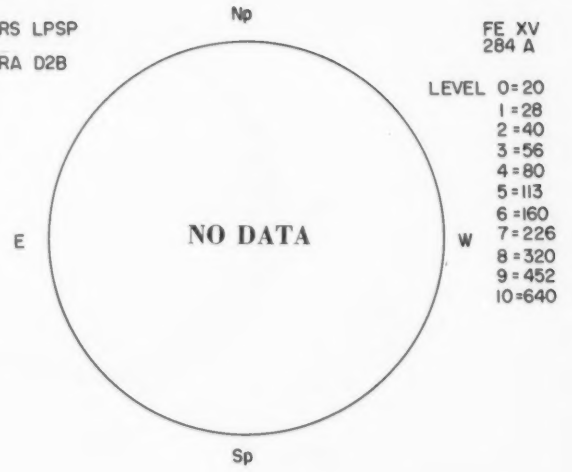
1724 UT

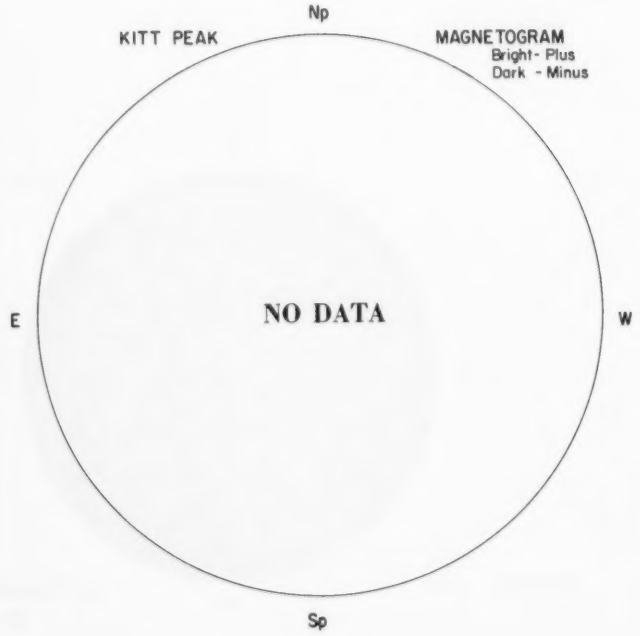
Ant. Temp. Unit 100°K

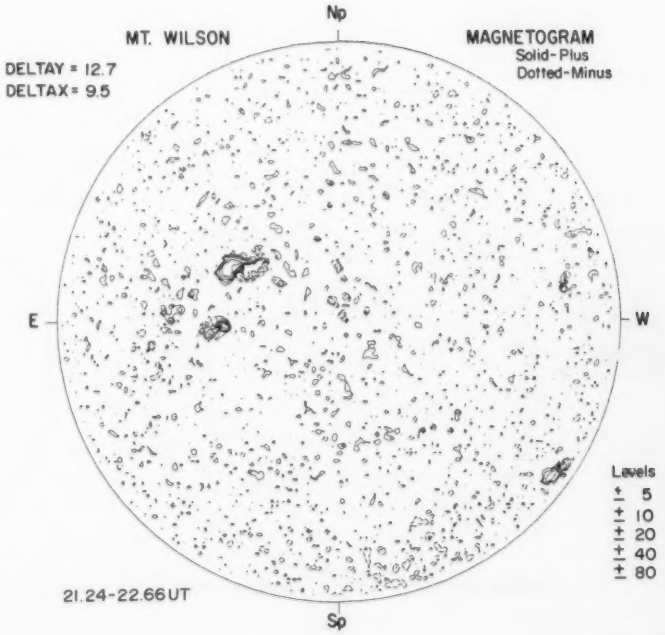
61
Mar 76

MARCH 17, 1976 (P = -24.80, B_o = -7.11, L_o = 227.70)



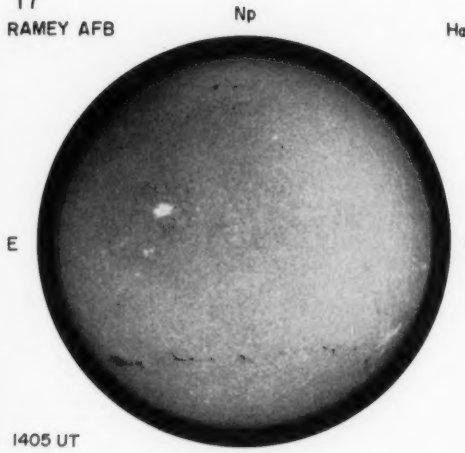






17

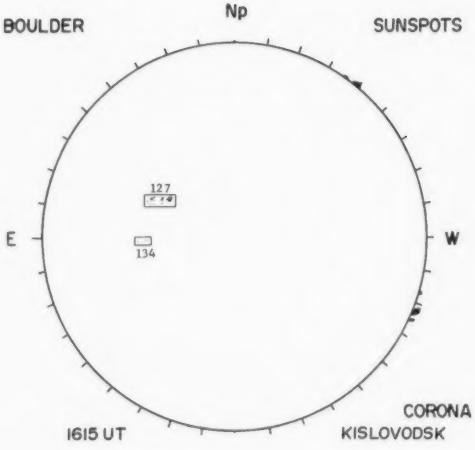
RAMEY AFB



1405 UT

Hα

BOULDER



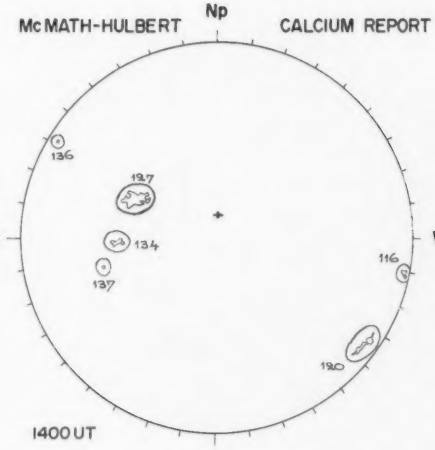
1615 UT

SUNSPOTS

CORONA

KISLOVODSK

McMATH-HULBERT



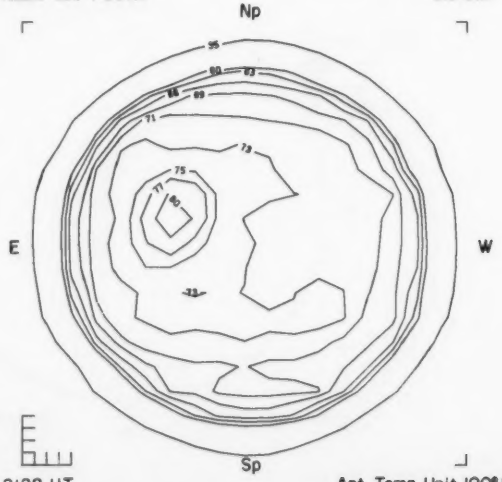
1400 UT

CALCIUM REPORT

FAIR	M
20	1000 25
27	1200 35
34	040025

NELC LA POSTA

2.0 CM

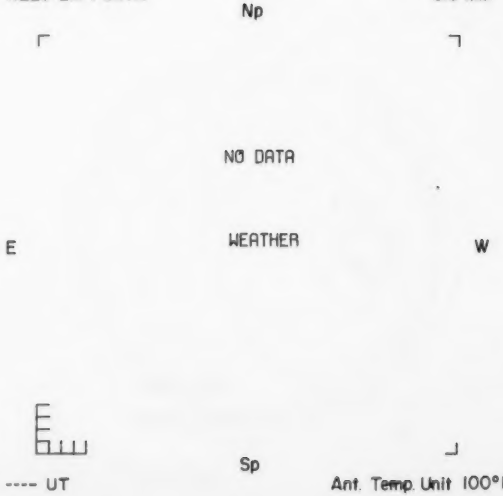


2128 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM



NO DATA

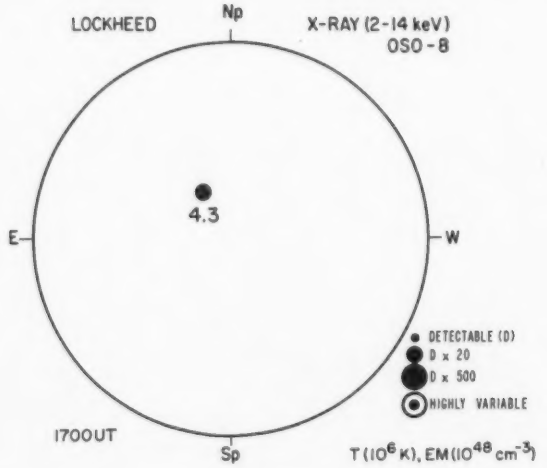
WEATHER

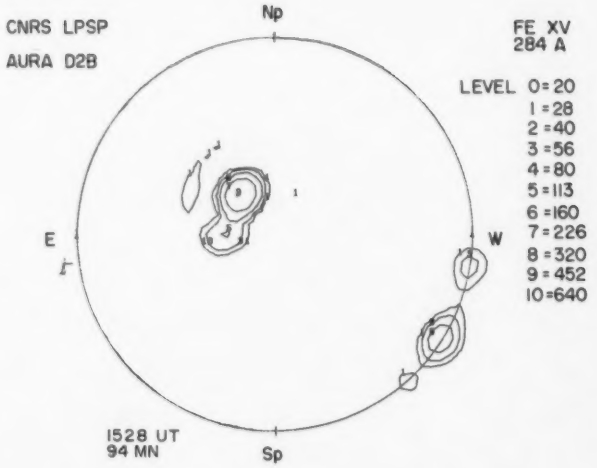
---- UT

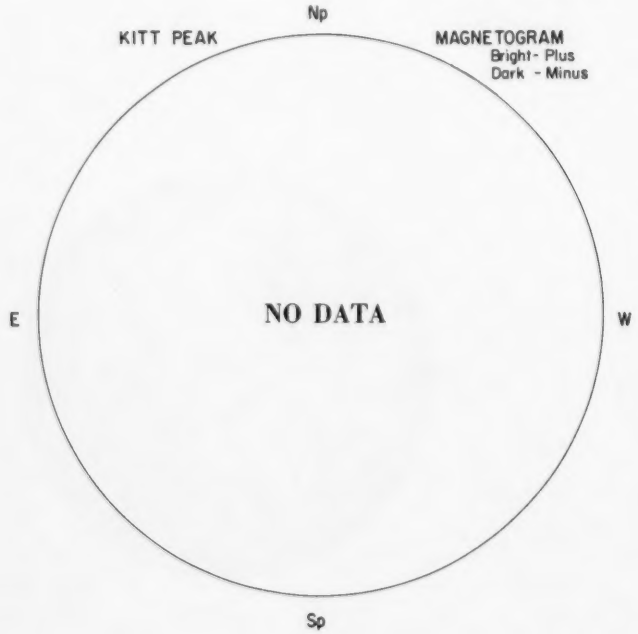
Ant. Temp. Unit 100°K

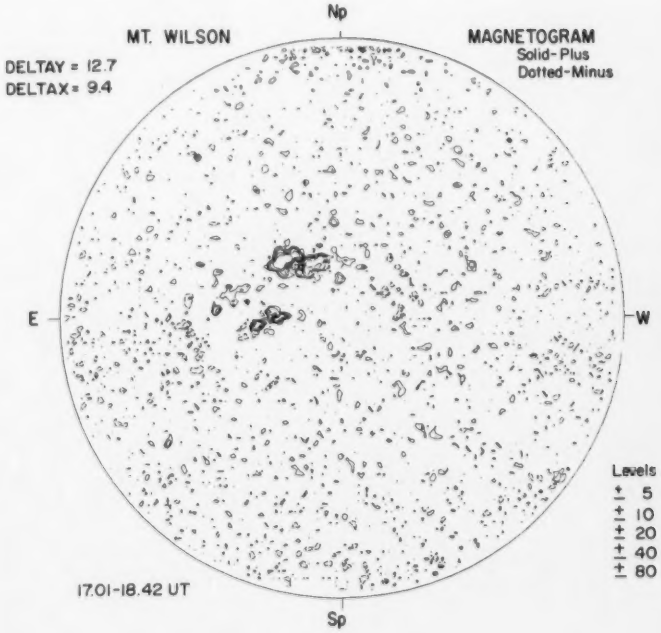
63
Mar 76

MARCH 18, 1976 (P =-24.95, B_o =-7.09, L_o =214.52)







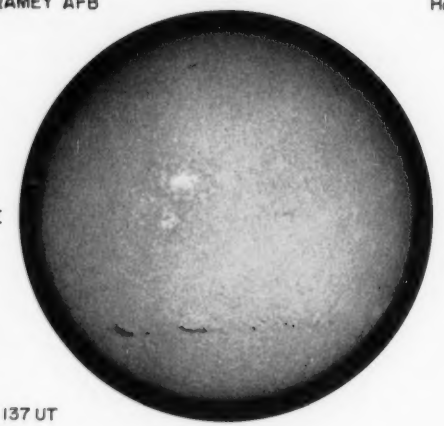


18

RAMEY AFB

Np

Hα



E W

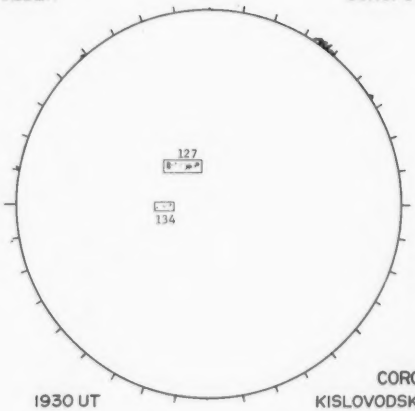
Sp

1137 UT

BOULDER

Np

SUNSPOTS



E W

Sp

1930 UT

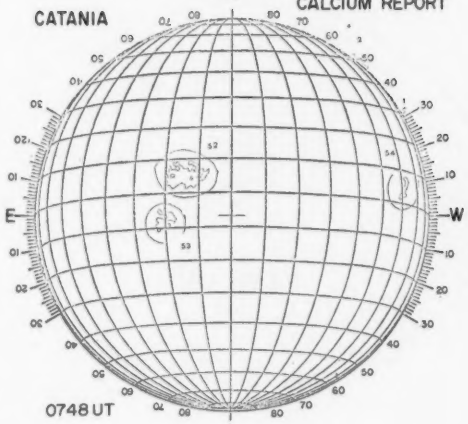
CORONA

KISLOVODSK

CATANIA

Np

CALCIUM REPORT



E W

Sp

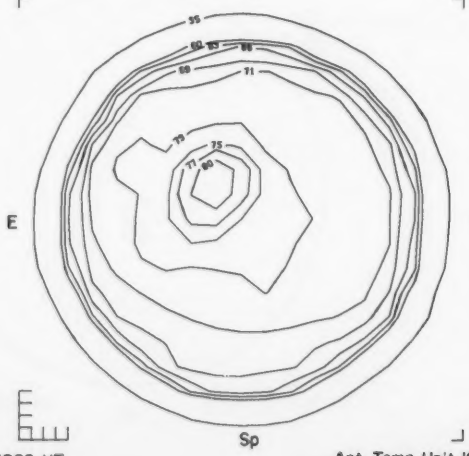
0748 UT

	FAIR	GD
52	2486	--
53	0903	--

NELC LA POSTA

2.0 CM

Np



E W

Sp

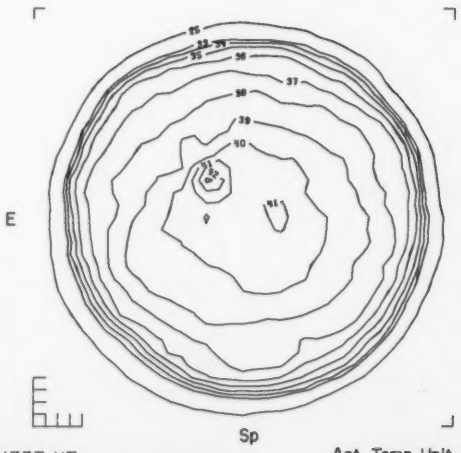
1909 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM

Np



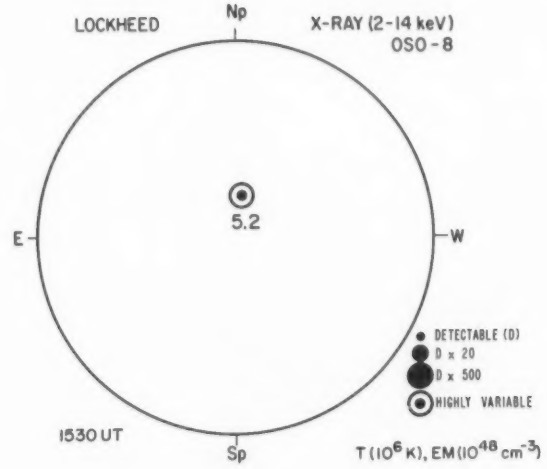
E W

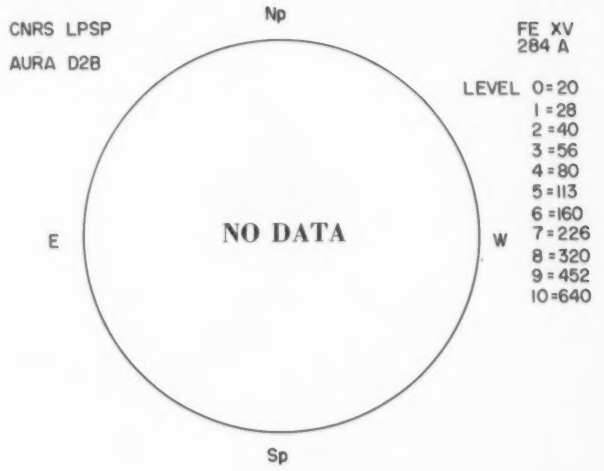
Sp

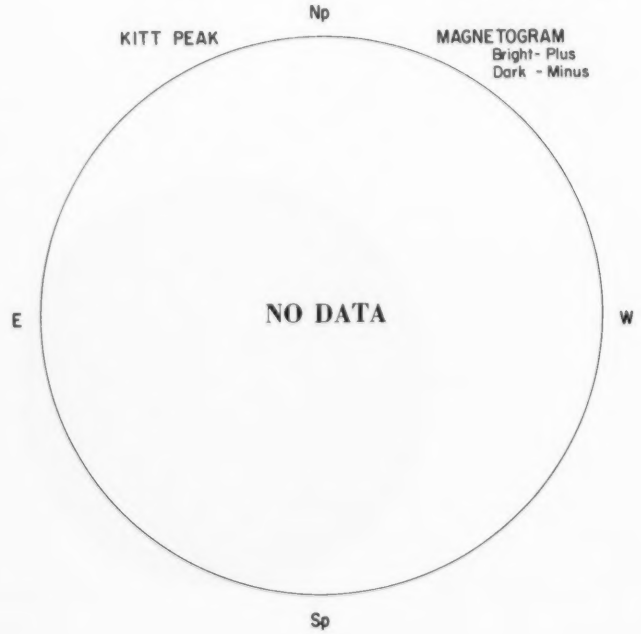
1737 UT

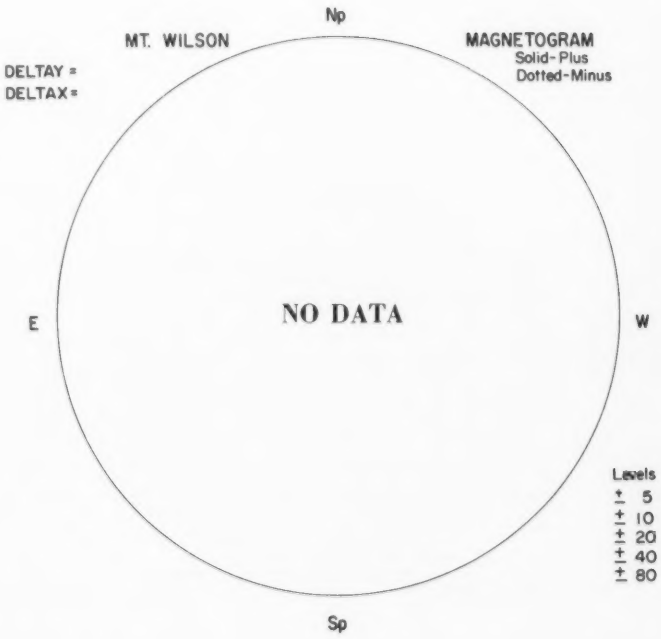
Ant. Temp. Unit 100°K

MARCH 19, 1976 (P =-25.08, B_o =-7.06, L_o =201.34)



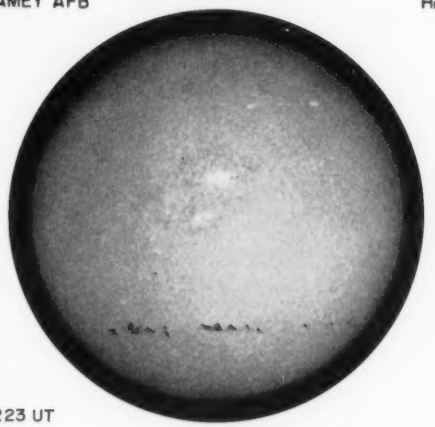






19

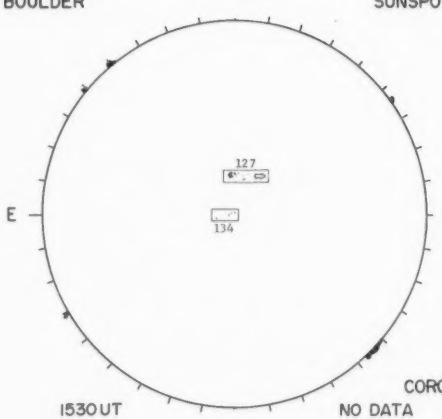
RAMEY AFB



1223 UT

Hα

BOULDER



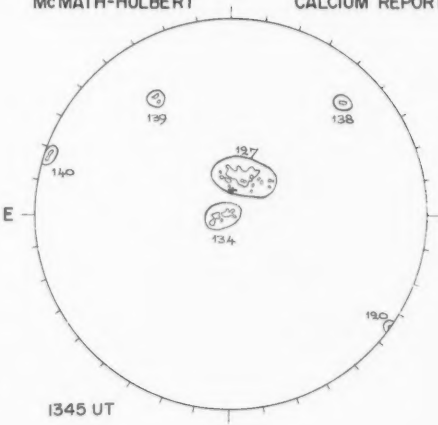
1530 UT

SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT



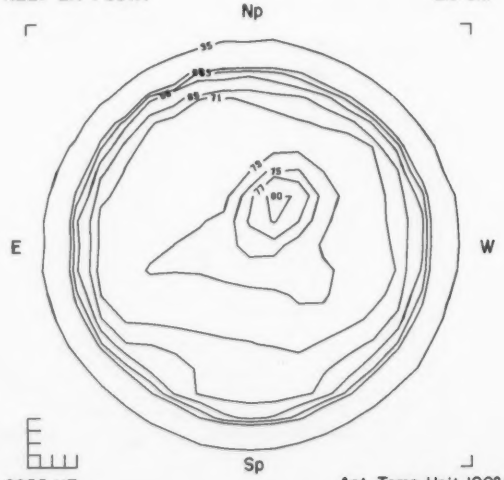
1345 UT

CALCIUM REPORT

GOOD	D
27	1700 35
34	0500 25

NELC LA POSTA

2.0 CM

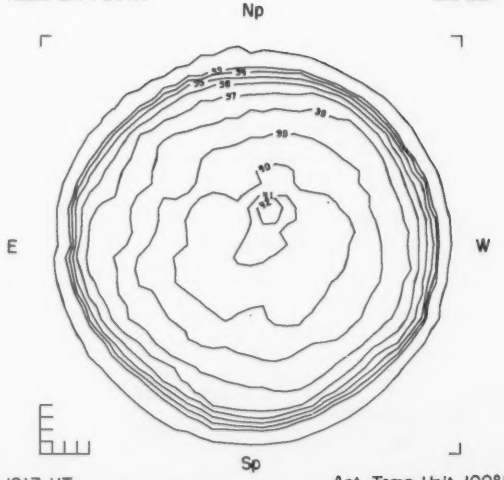


2055 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM



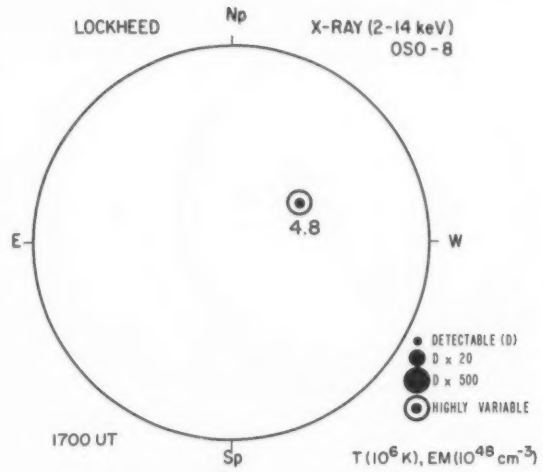
1917 UT

Ant. Temp. Unit 100°K

67
Mar 76

MARCH 20, 1976 (P=-25.21, B_o=-7.03, L_o=188.15)

LOCKHEED X-RAY (2-14 keV) OSO-8



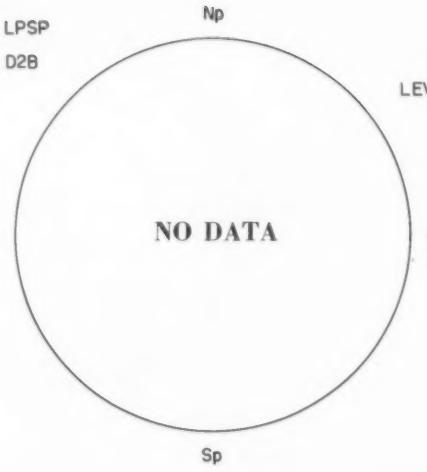
1700 UT

T(10^6 K), EM(10^{48} cm^{-3})

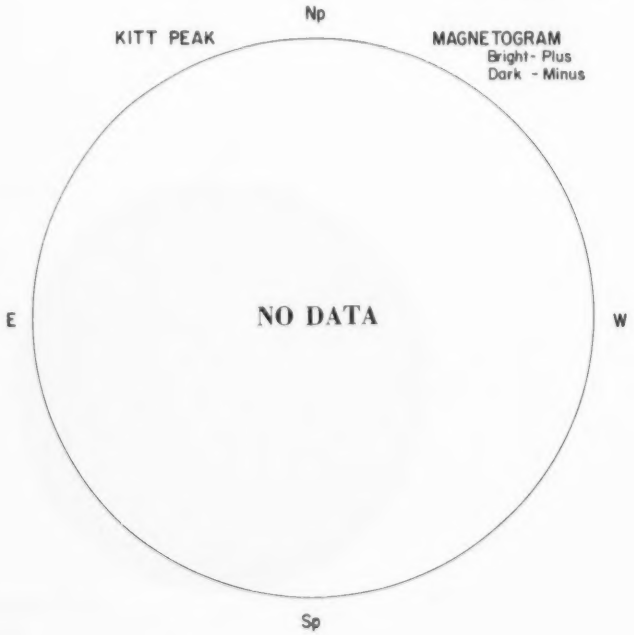
CNRS LPSP
AURA D2B

FE XV
284 A

LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640

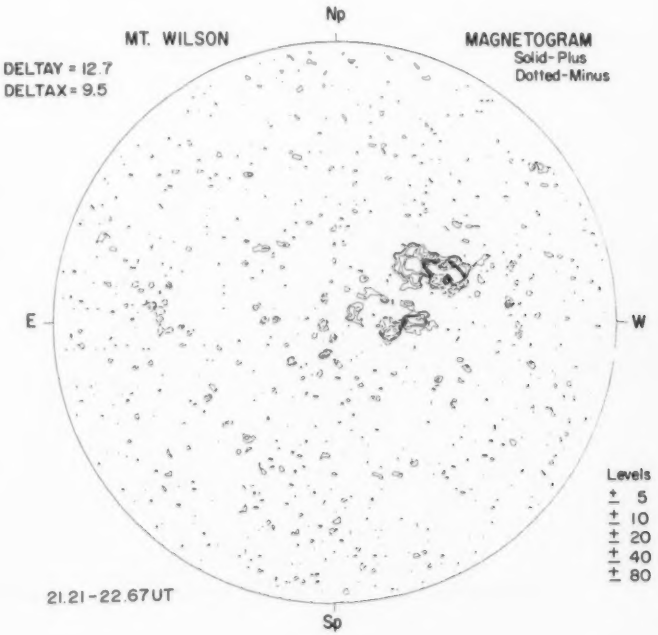


KITT PEAK MAGNETOGRAM
Bright - Plus
Dark - Minus



MT. WILSON MAGNETOGRAM
Solid - Plus
Dotted - Minus

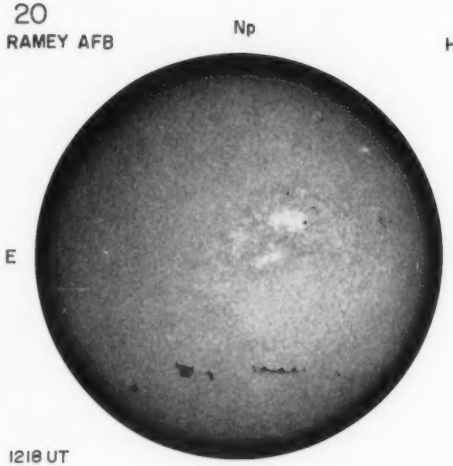
DELTAY = 12.7
DELTAX = 9.5



21.21-22.67UT

20

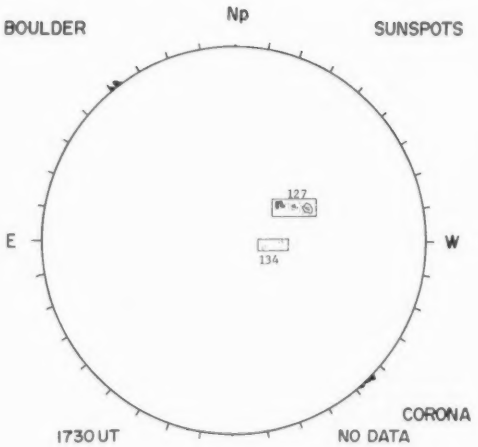
RAMEY AFB



1218 UT

Hα

BOULDER



1730 UT

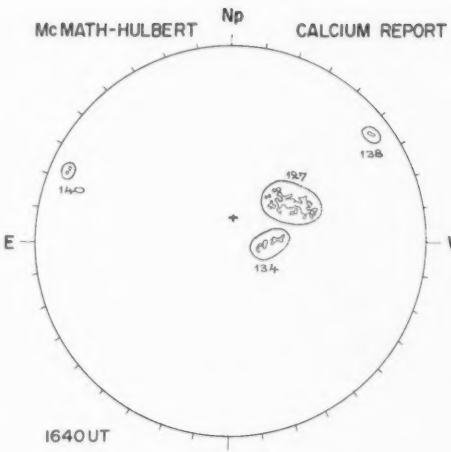
SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT

CALCIUM REPORT

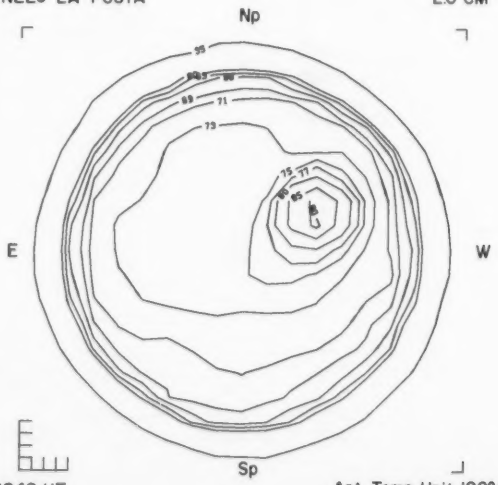


1640 UT

FAIR	M
27	2000 3.5
34	0500 2.5
38	0300 2.5

NELC LA POSTA

2.0 CM



1849 UT

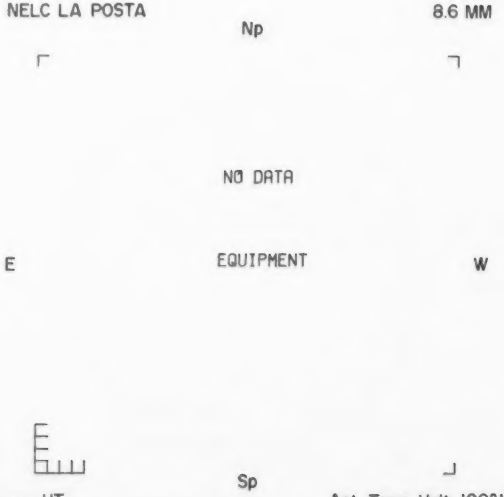
Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM

NO DATA

EQUIPMENT

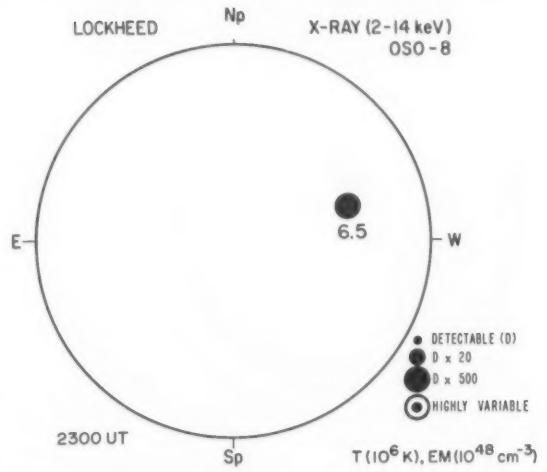


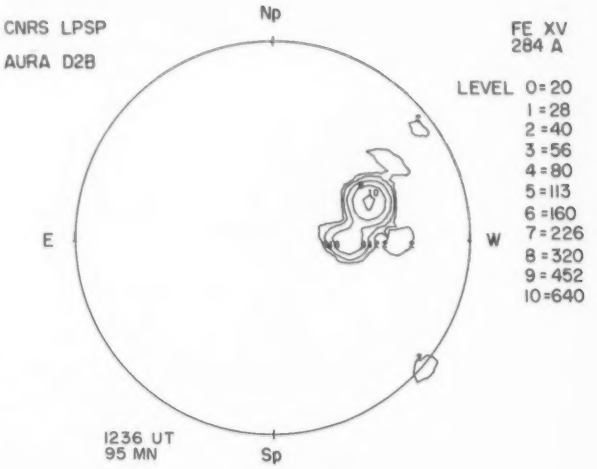
---- UT

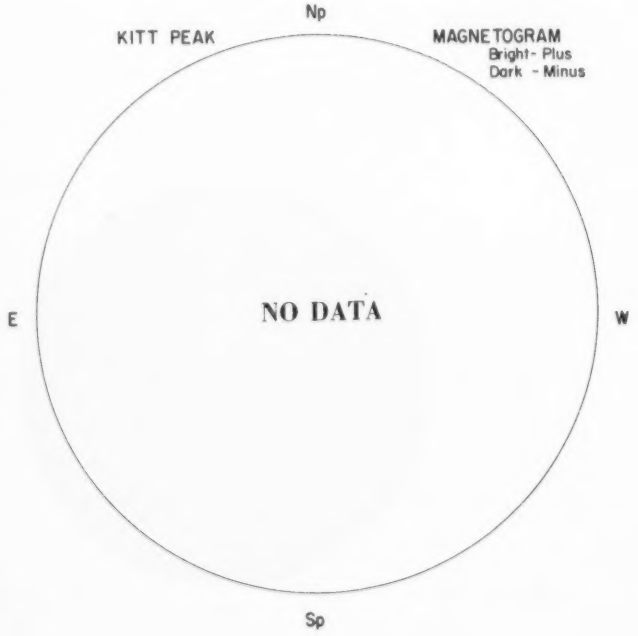
Ant. Temp. Unit 100°K

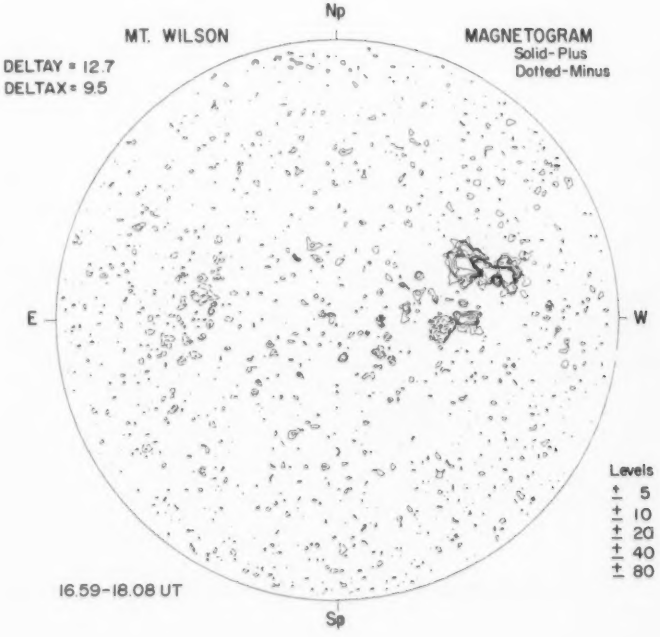
69
Mar 76

MARCH 21, 1976 (P = -25.33, B_0 = -7.00, L_0 = 174.97)



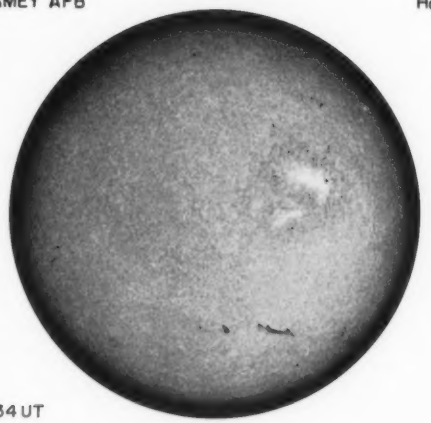






21

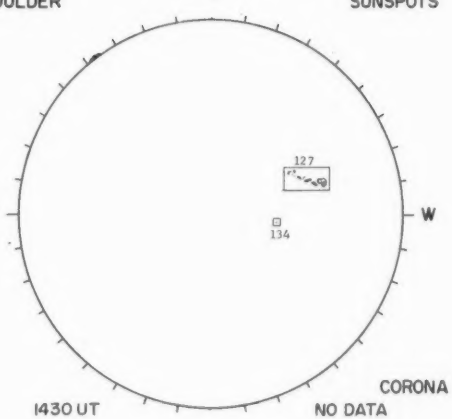
RAMEY AFB



Hα

1134 UT

BOULDER



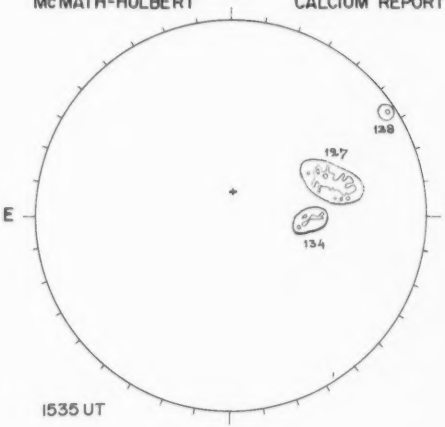
SUNSPOTS

1430 UT

CORONA

NO DATA

McMATH-HULBERT



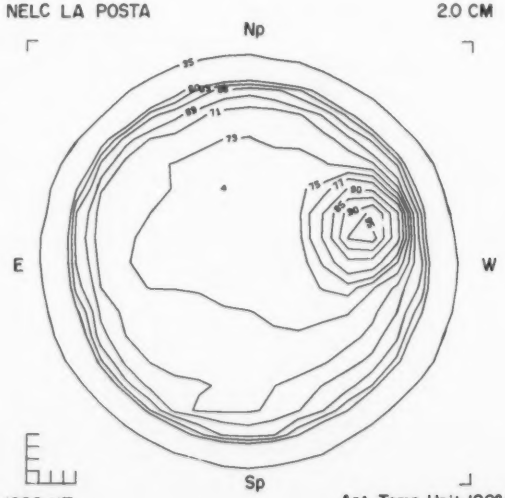
1535 UT

CALCIUM REPORT

FAIR	S
27	2200 30
34	0500 25
38	0300 25

NELC LA POSTA

2.0 CM

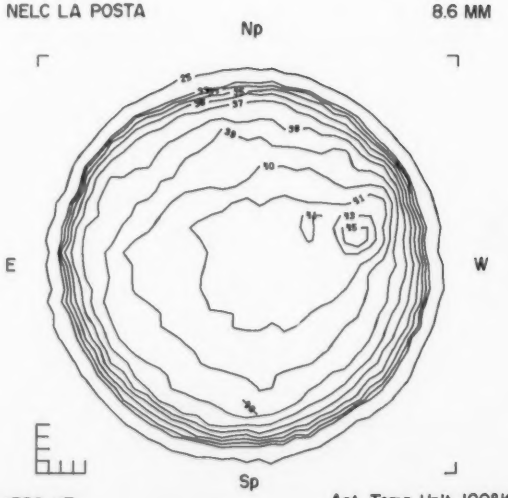


1929 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM

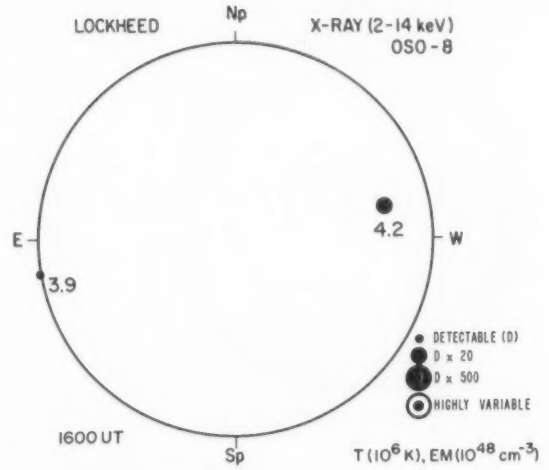


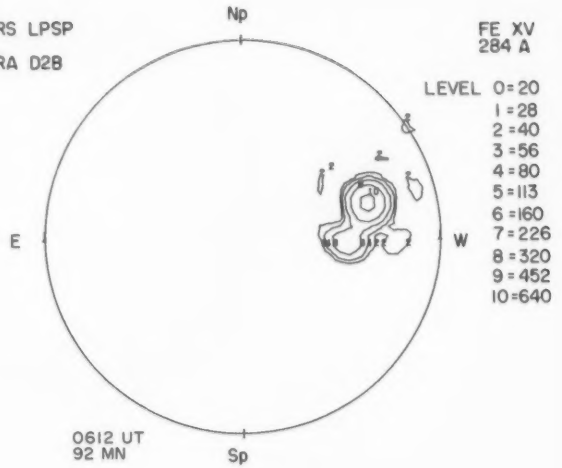
1756 UT

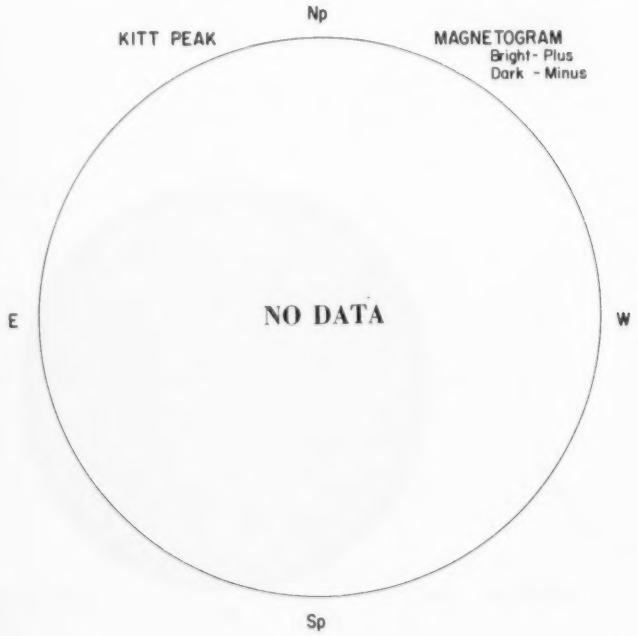
Ant. Temp. Unit 100°K

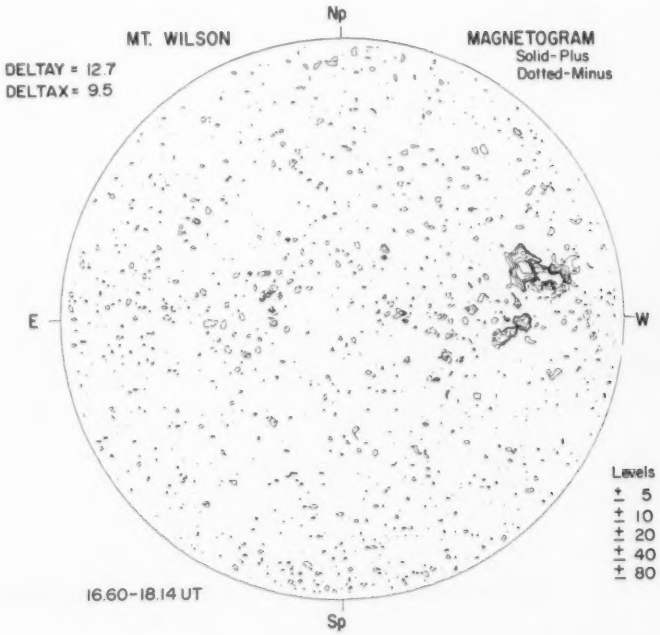
71
Mar 76

MARCH 22, 1976 (P=-25.45, B_0=-6.97, L_0=161.78)



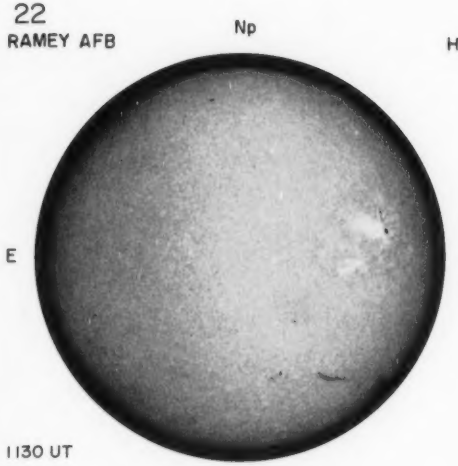






22

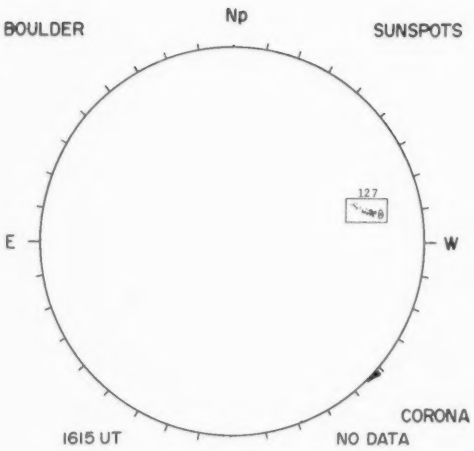
RAMEY AFB



1130 UT

Hα

BOULDER



1615 UT

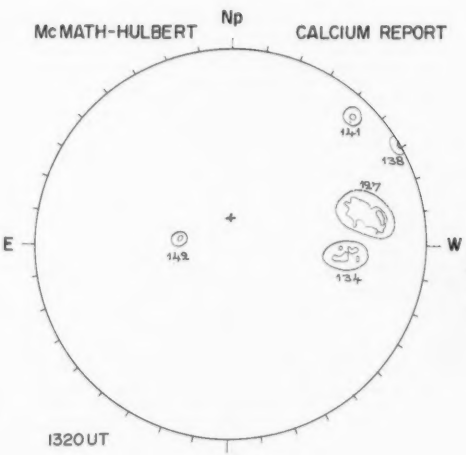
SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT

CALCIUM REPORT



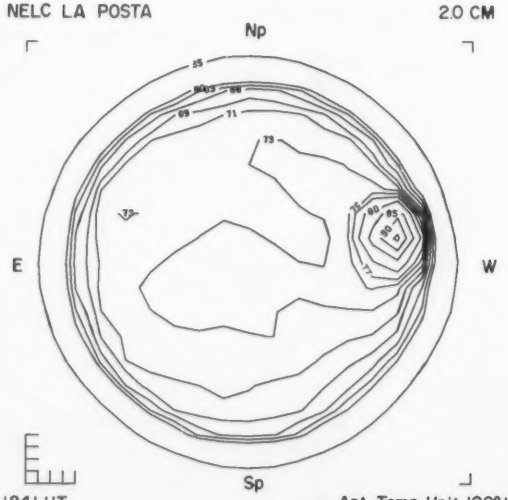
1320 UT

FAIR	D

27 2800 3.0
34 0700 2.5

NELC LA POSTA

2.0 CM

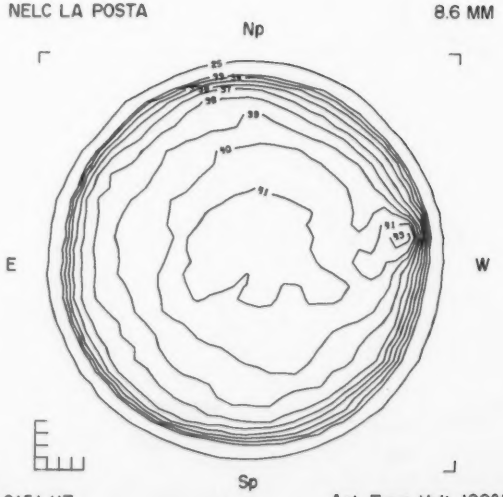


1841 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM



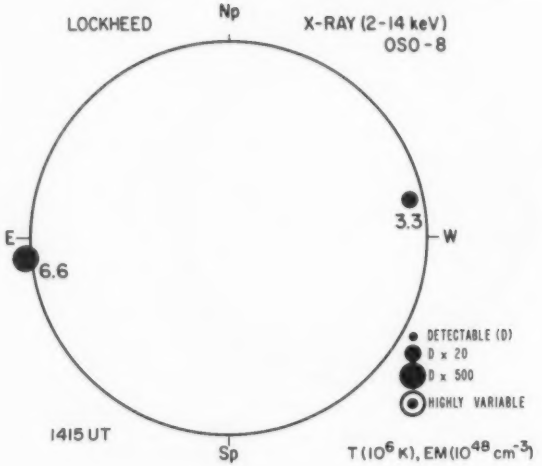
2151 UT

Ant. Temp. Unit 100°K

73
Mar 76

MARCH 23, 1976 (P = -25.56, B_0 = -6.93, L_0 = 148.60)

LOCKHEED
X-RAY (2-14 keV)
OSO-8

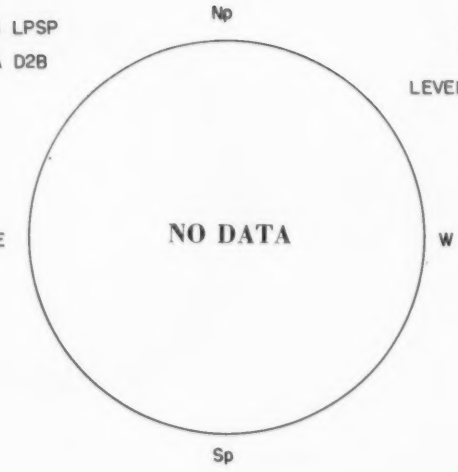


1415 UT

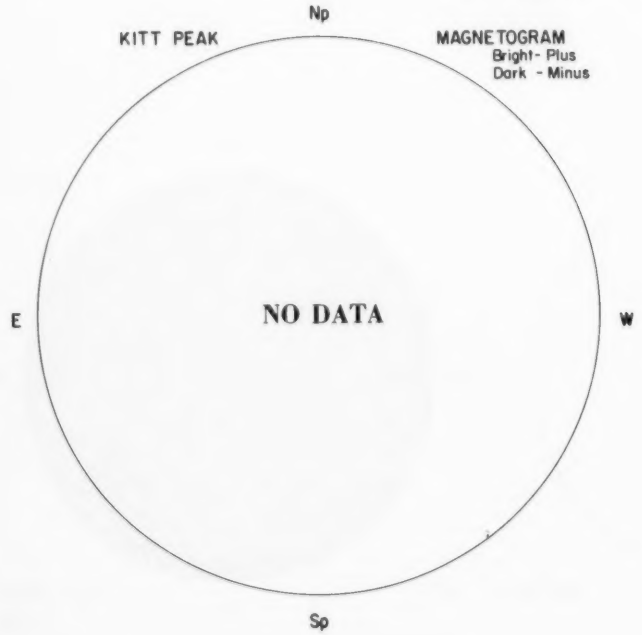
T (10^6 K), EM (10^{48} cm^{-3})

CNRS LPSP
AURA D2B
FE XV
284 A

LEVEL 0 = 20
1 = 28
2 = 40
3 = 56
4 = 80
5 = 113
6 = 160
7 = 226
8 = 320
9 = 452
10 = 640

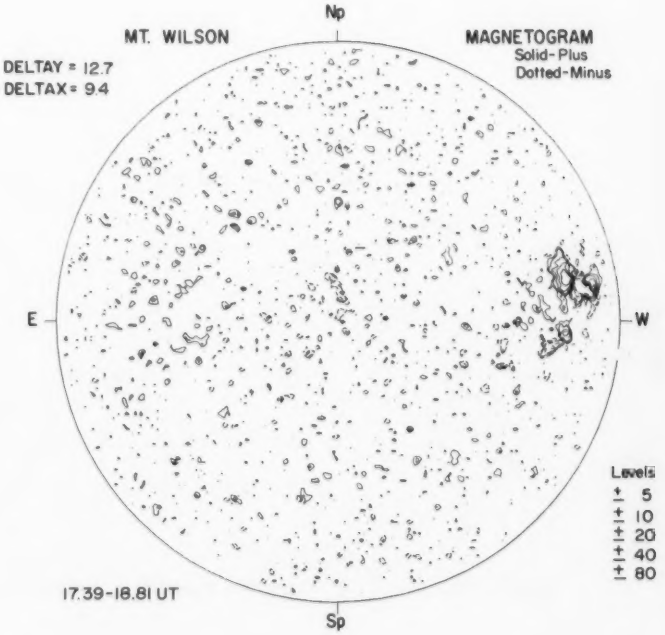


KITT PEAK
MAGNETOGRAM
Bright - Plus
Dark - Minus



MT. WILSON
MAGNETOGRAM
Solid - Plus
Dotted - Minus

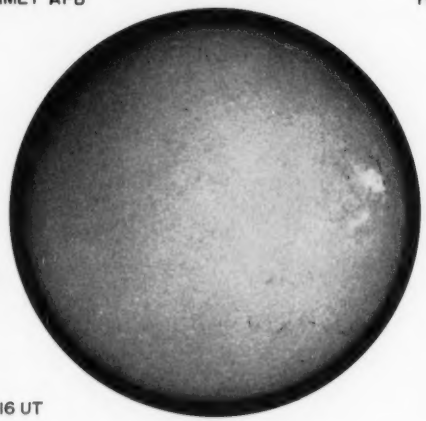
DELTAY = 12.7
DELTAX = 9.4



17.39-18.81 UT

23

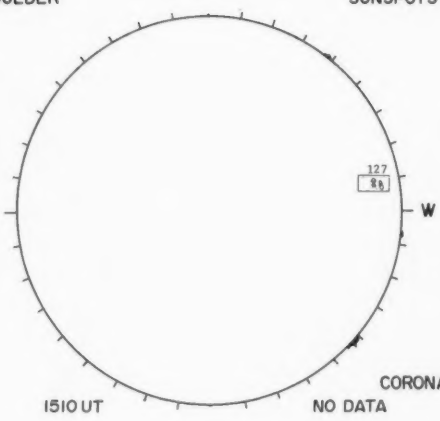
RAMEY AFB



1216 UT

Hα

BOULDER



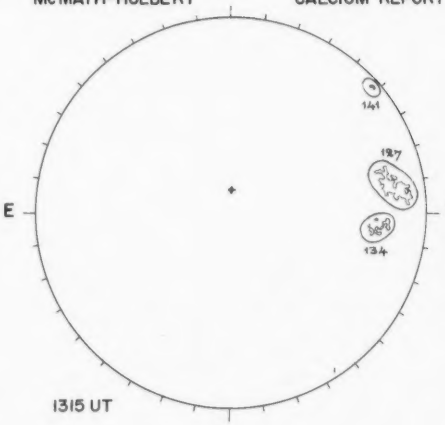
1510 UT

SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT



1315 UT

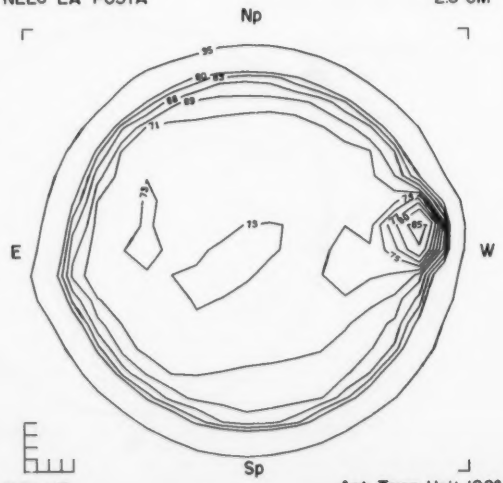
CALCIUM REPORT

GOOD | D

27 3600 35
34 0800 25

NELC LA POSTA

2.0 CM

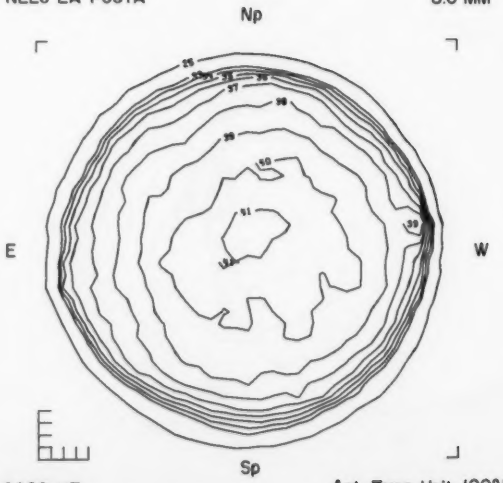


2151 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM

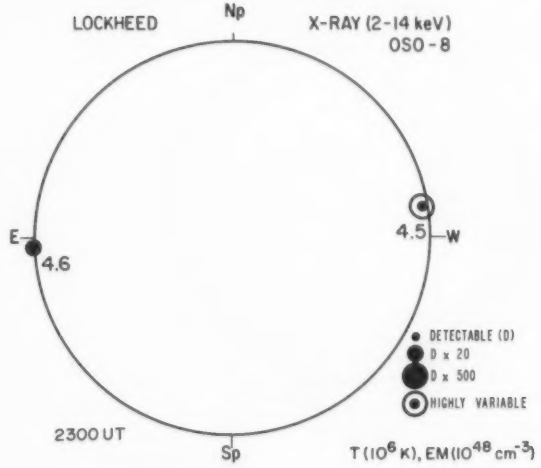


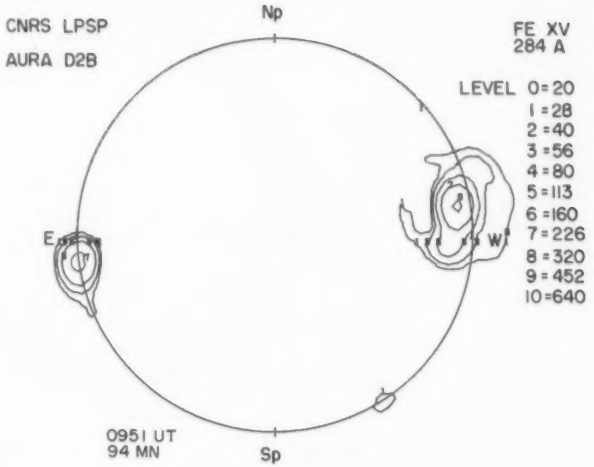
2022 UT

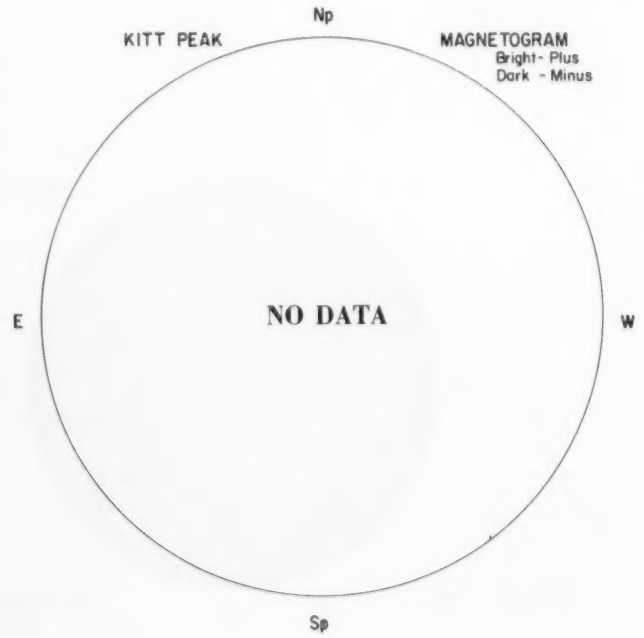
Ant. Temp. Unit 100°K

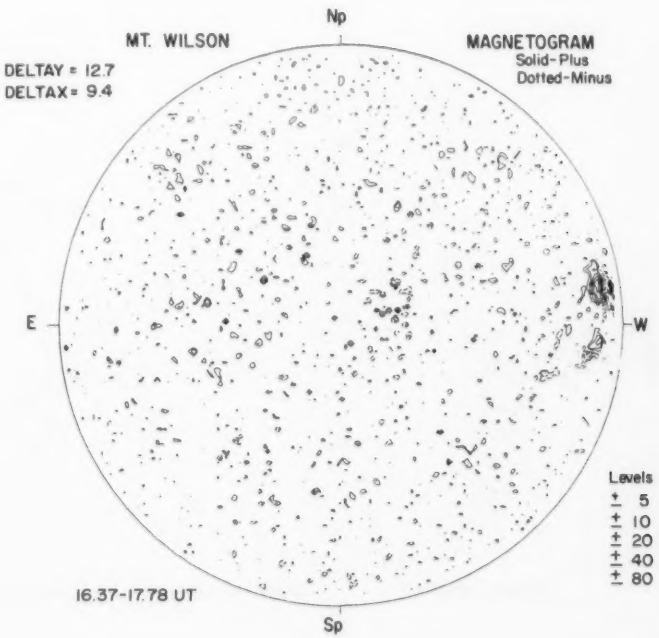
75
Mar 76

MARCH 24, 1976 (P = -25.66, B_o = -6.89, L_o = 135.41)



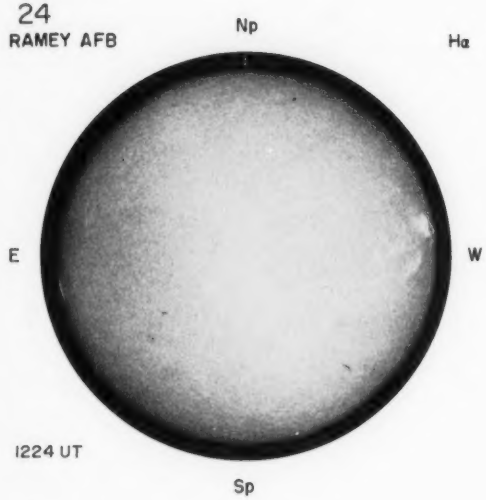






24

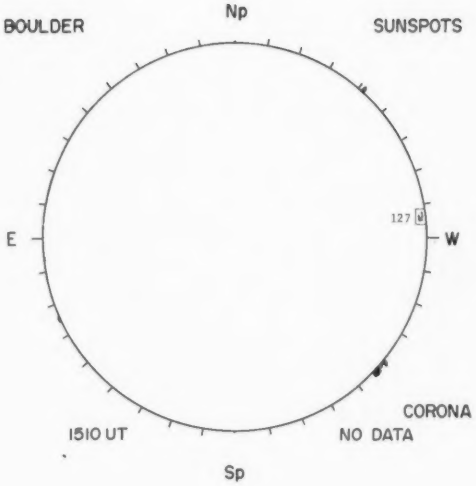
RAMEY AFB



1224 UT

Hα

BOULDER



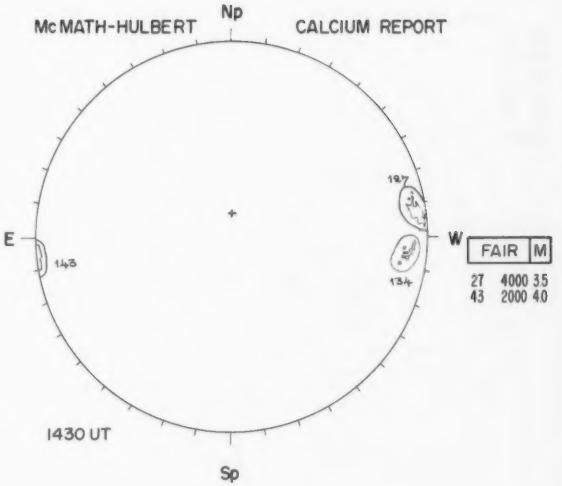
1510 UT

SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT



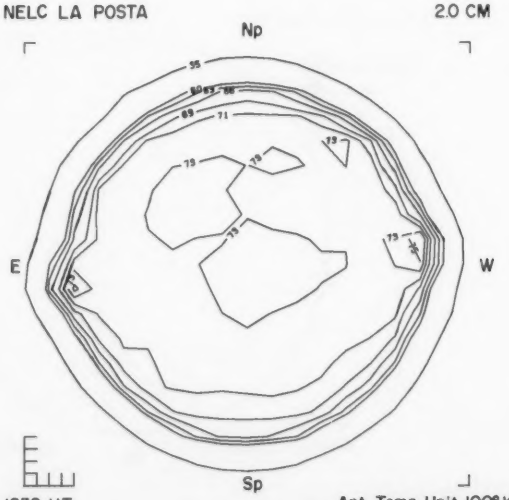
1430 UT

CALCIUM REPORT

FAIR	M
27	4000 3.5
43	2000 4.0

NELC LA POSTA

2.0 CM

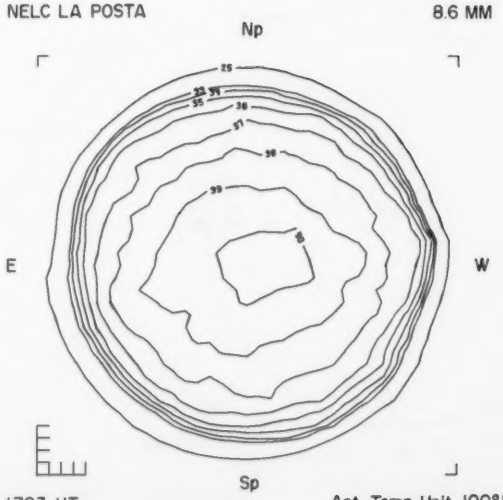


1832 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM

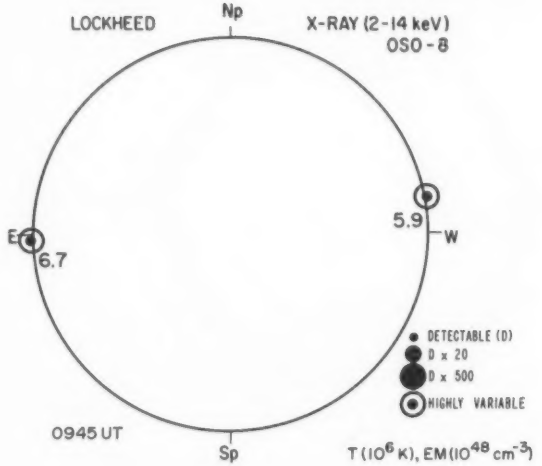


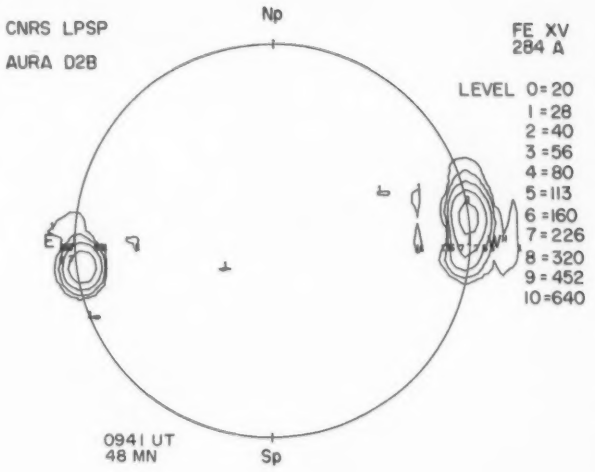
1703 UT

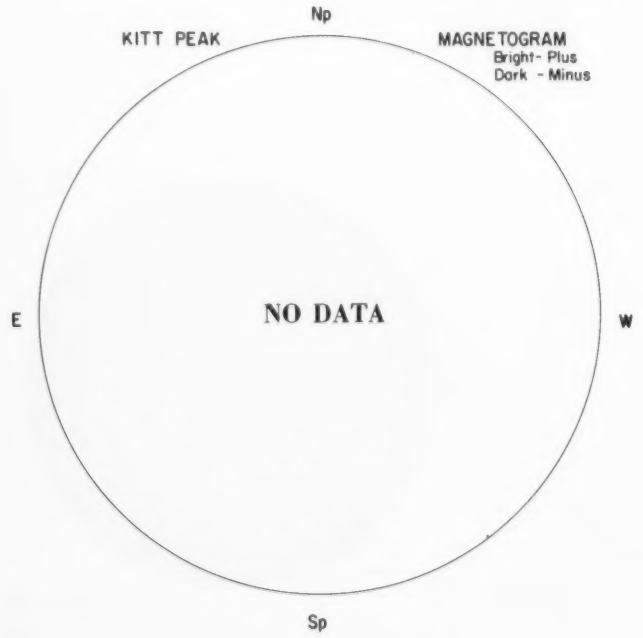
Ant. Temp. Unit 100°K

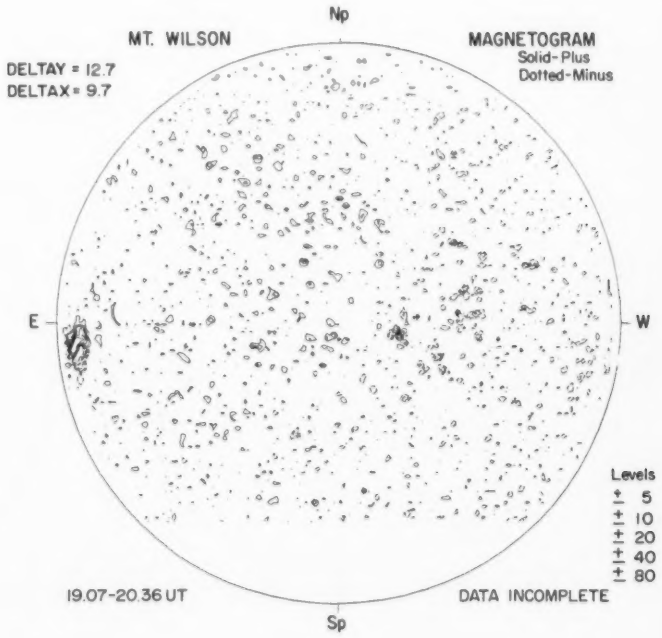
77
Mar 76

MARCH 25, 1976 (P =-25.75, B_0 =-6.85, L_0 = 122.22)



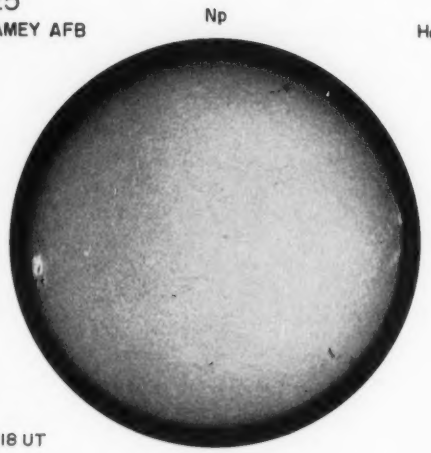






25

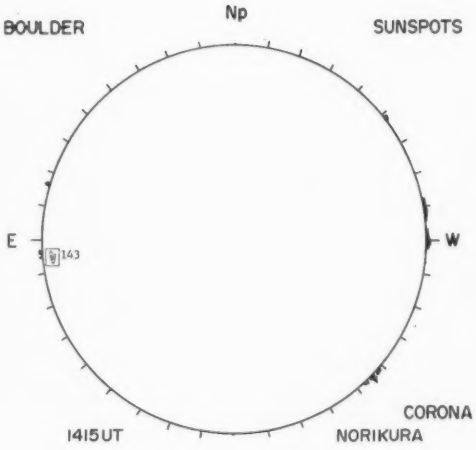
RAMEY AFB



1218 UT

Hα

BOULDER



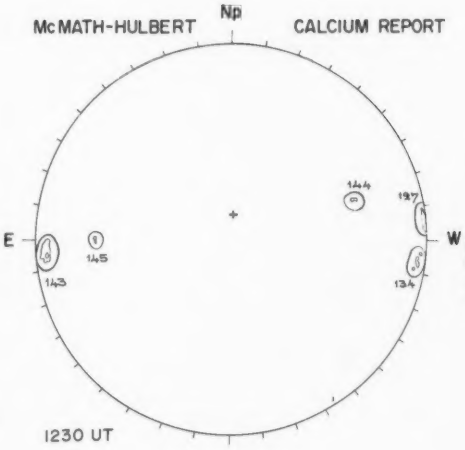
1415UT

SUNSPOTS

CORONA

NORIKURA

McMATH-HULBERT



1230 UT

CALCIUM REPORT

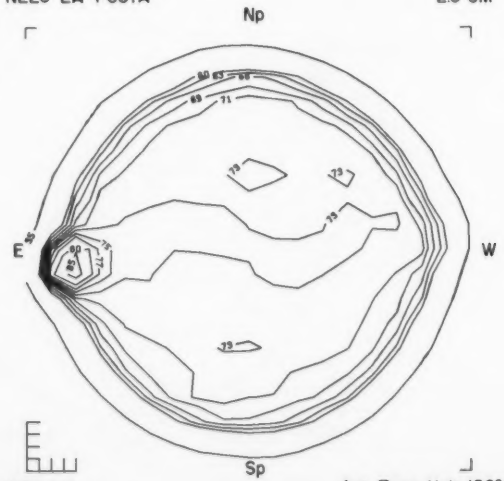
FAIR D

27 2500 35

43 2500 35

NELC LA POSTA

2.0 CM

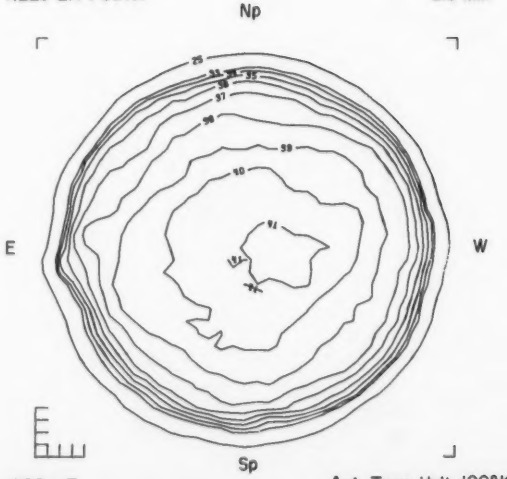


1930 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM

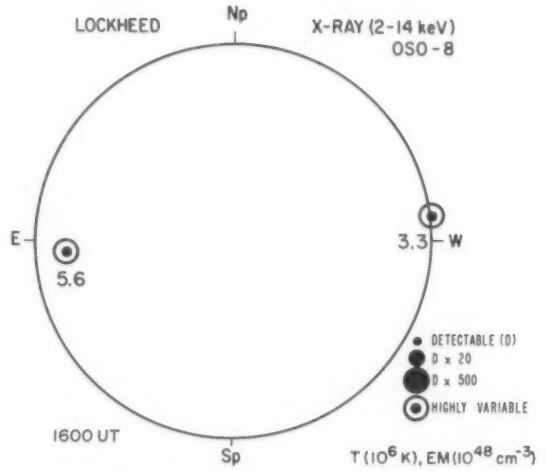


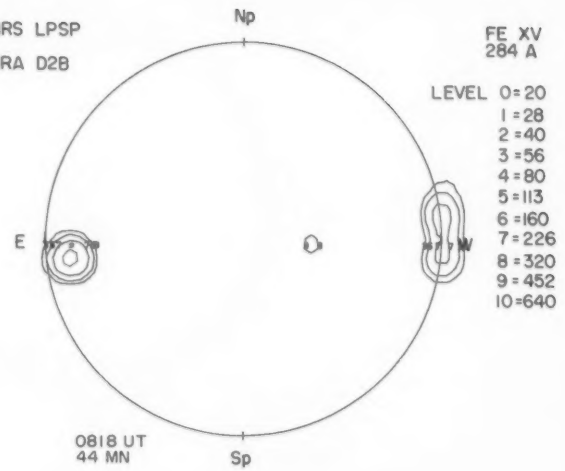
1753 UT

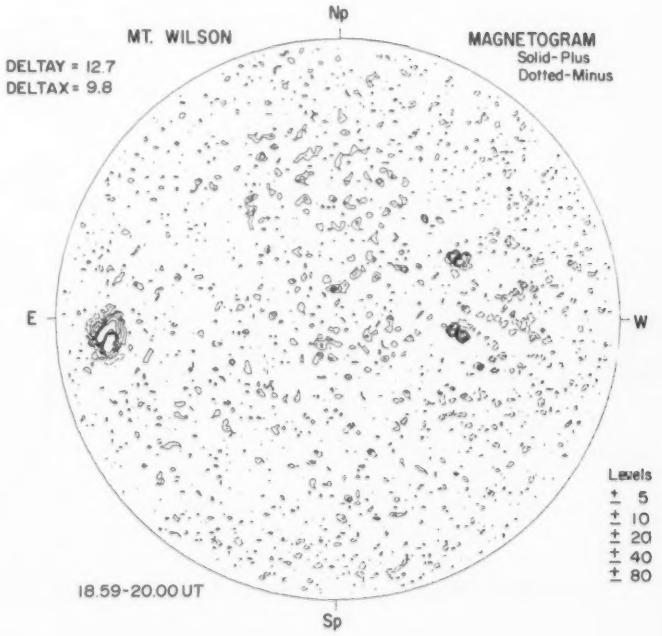
Ant. Temp. Unit 100°K

79 Mar 76

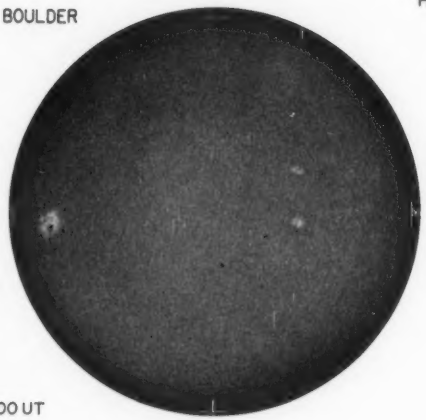
MARCH 26, 1976 (P = -25.84, B_0 = -6.81, L_0 = 109.04)





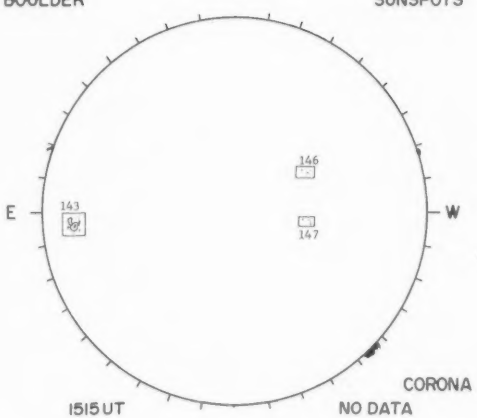


BOULDER Hα



1900 UT

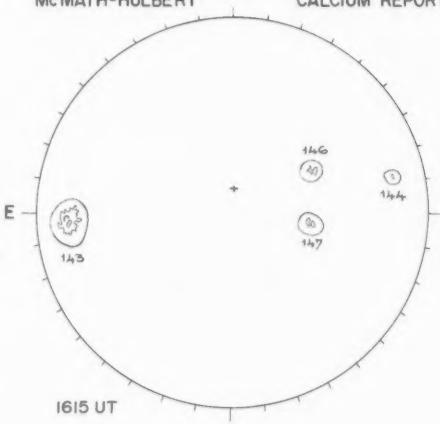
BOULDER SUNSPOTS



1515 UT

CORONA
NO DATA

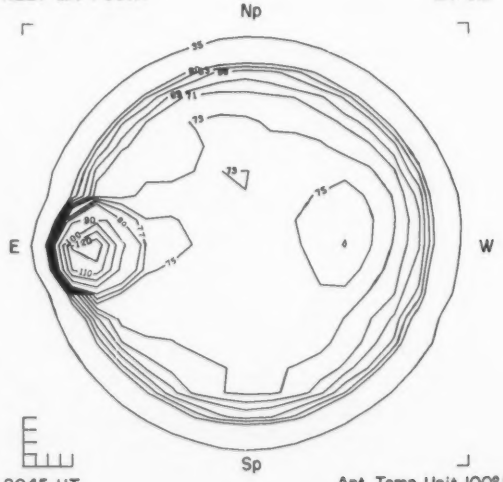
McMATH-HULBERT CALCIUM REPORT



1615 UT

FAIR	M
43	3000 35
46	0300 30
47	0300 35

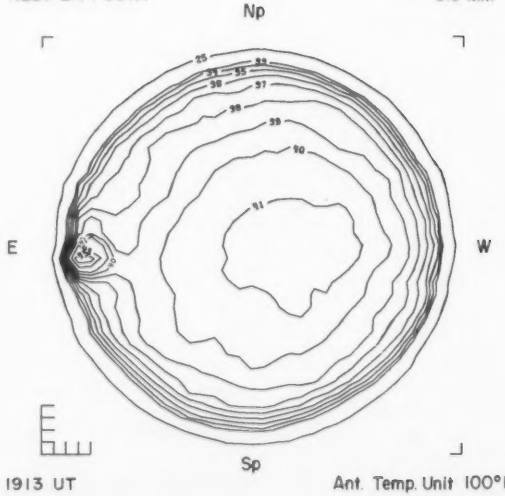
NELC LA POSTA 2.0 CM



2045 UT

Ant. Temp. Unit 100°K

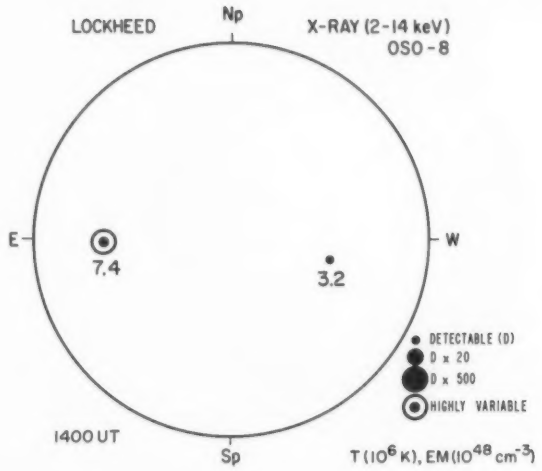
NELC LA POSTA 8.6 MM

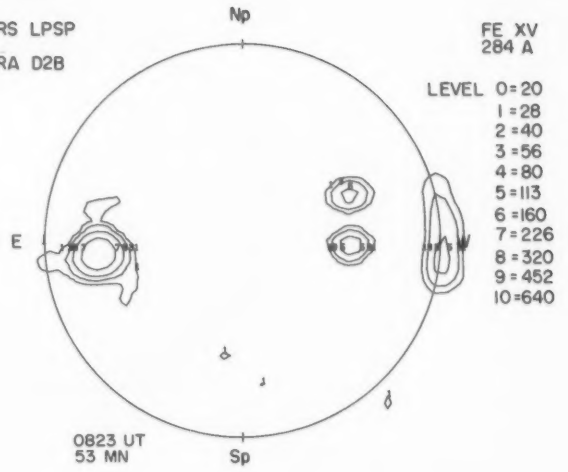


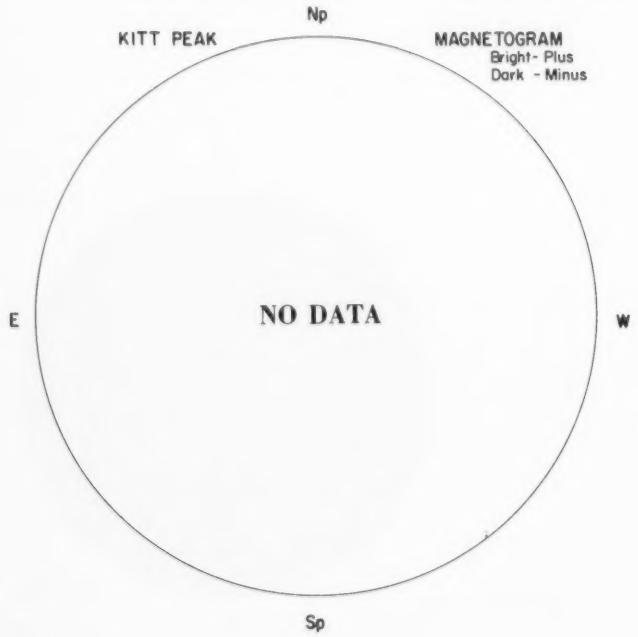
1913 UT

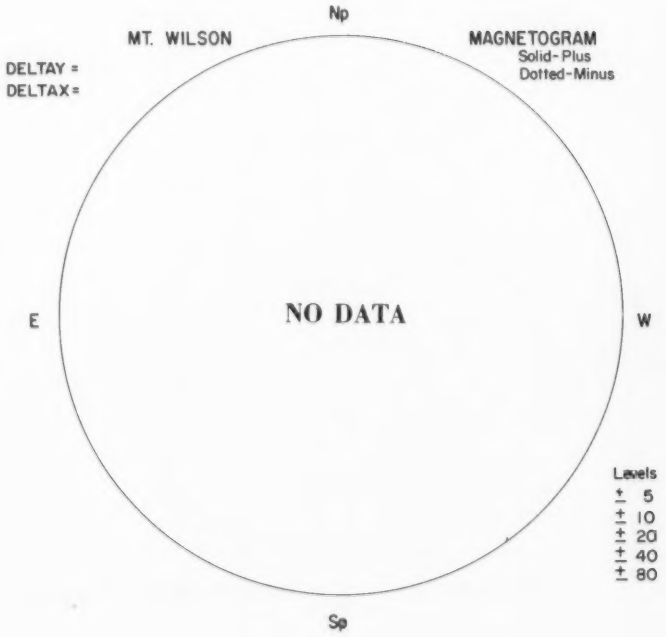
Ant. Temp. Unit 100°K

MARCH 27, 1976 (P =-25.92, B_0 =-6.77, L_0 =95.85)



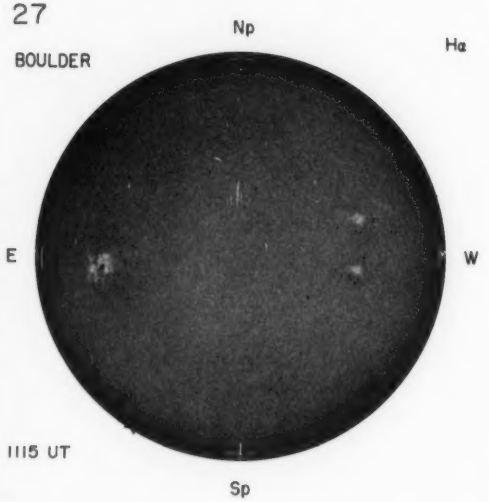






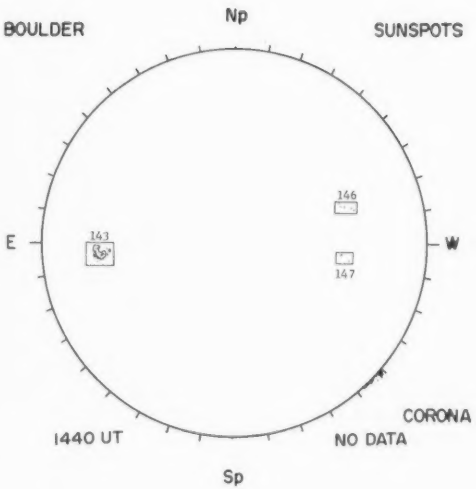
27

BOULDER



1115 UT

Hα BOULDER



1440 UT

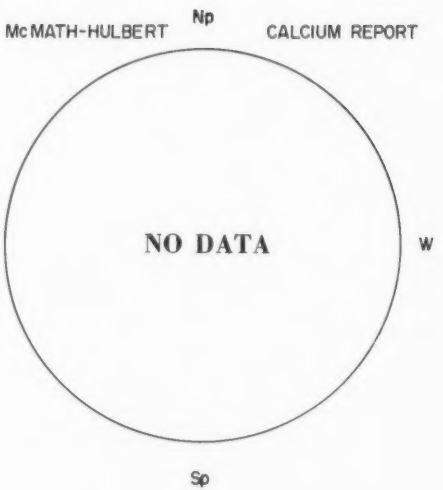
SUNSPOTS

CORONA

NO DATA

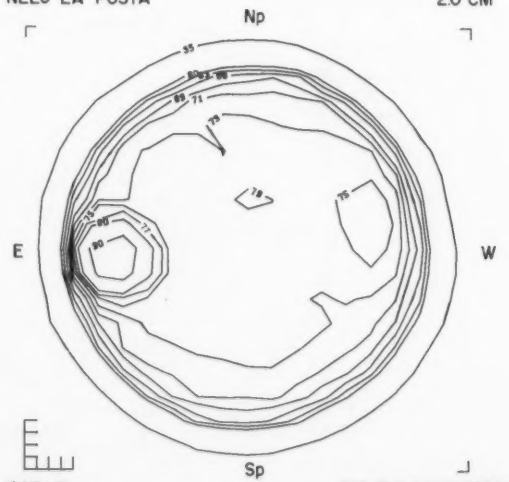
McMATH-HULBERT

CALCIUM REPORT



NELC LA POSTA

2.0 CM

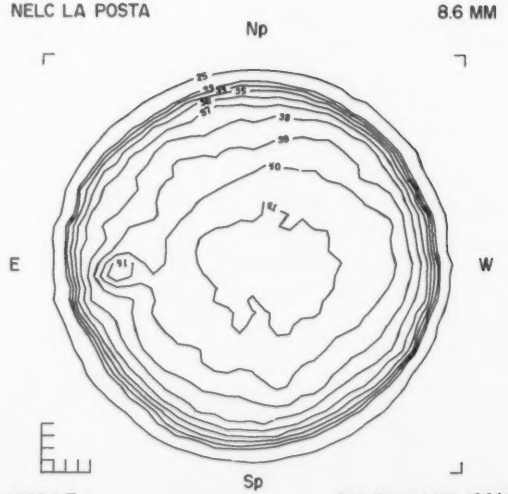


1805 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM

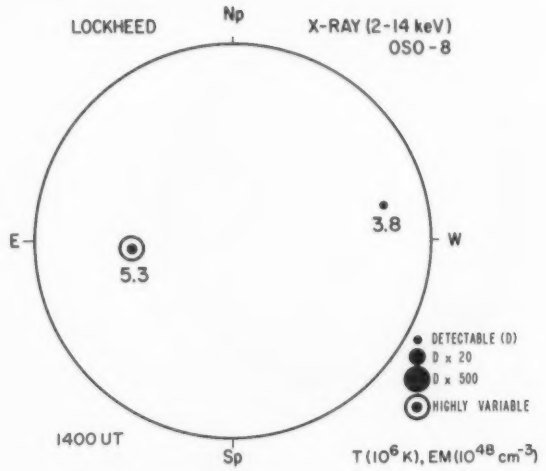


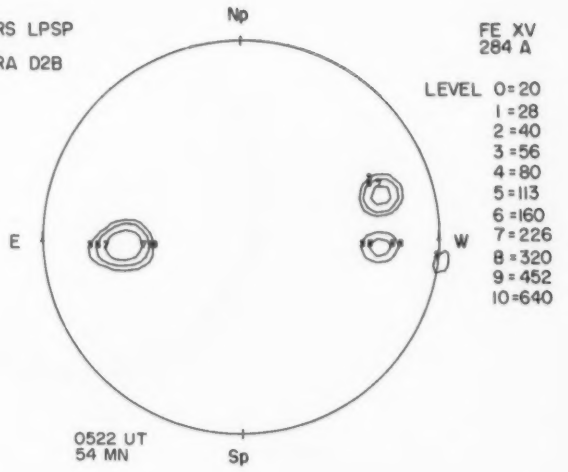
1856 UT

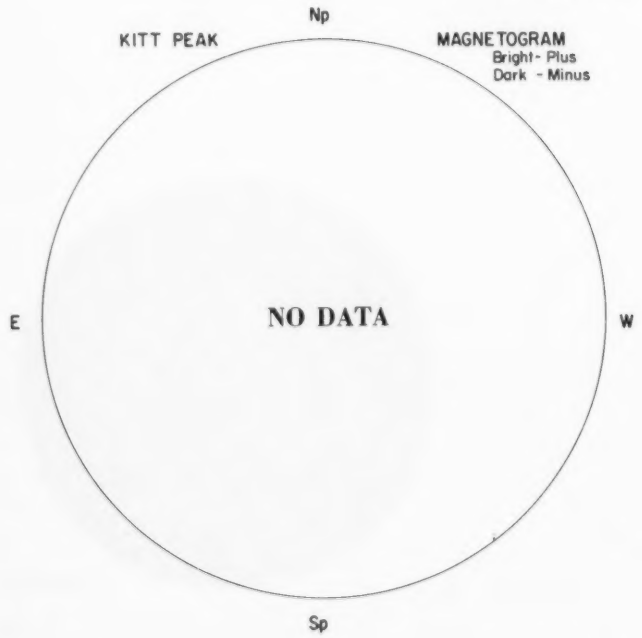
Ant. Temp. Unit 100°K

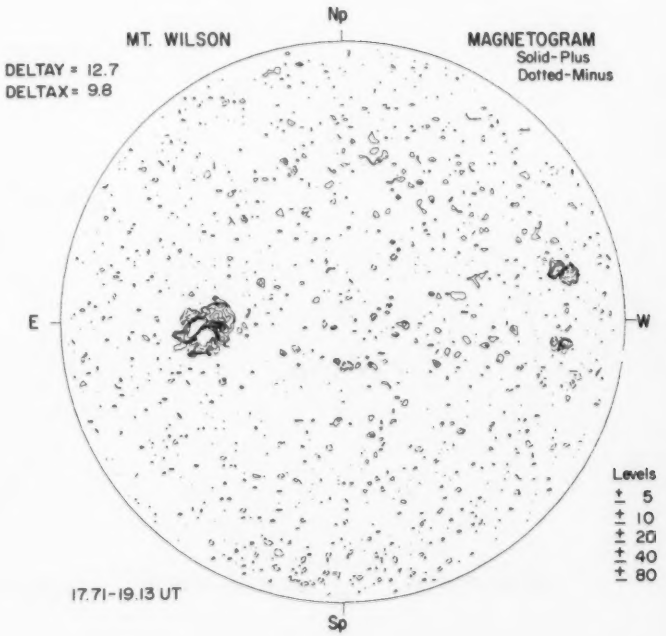
83
Mar 76

MARCH 28, 1976 (P =-25.99, B_o =-6.72, L_o =82.66)

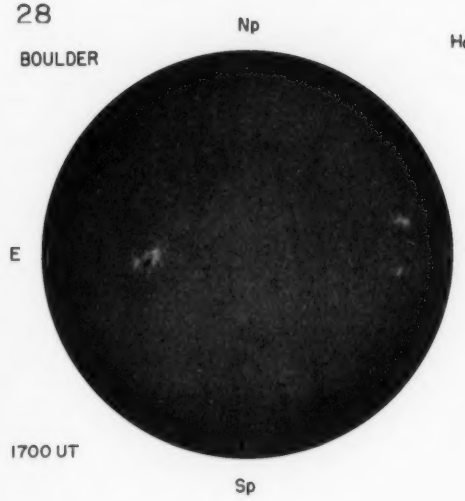


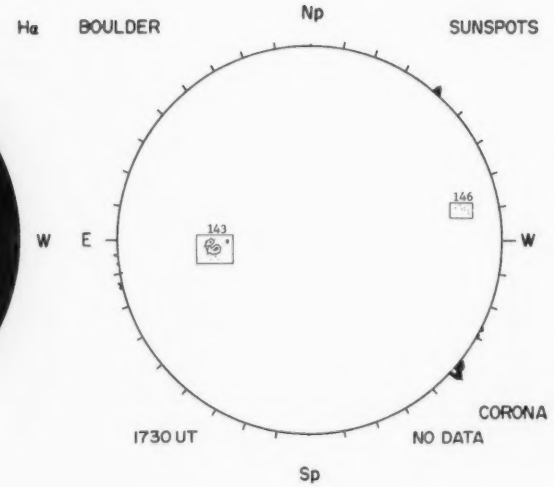


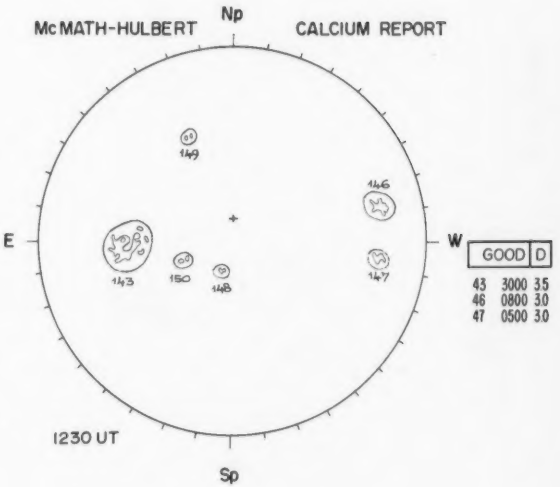


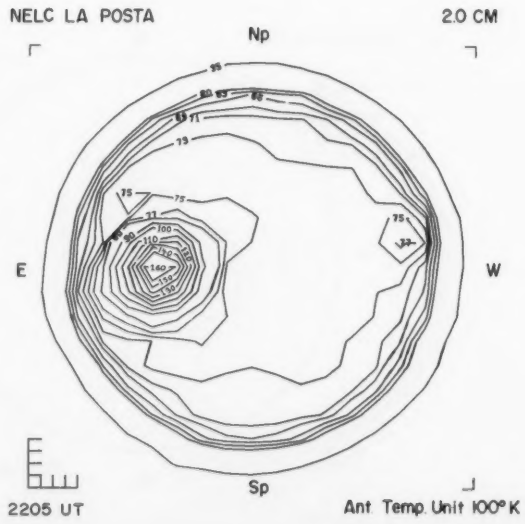


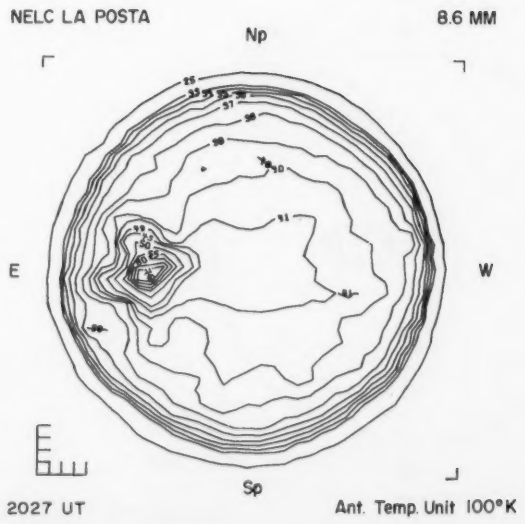
28


Np
BOULDER
E
W
Sp
1700 UT

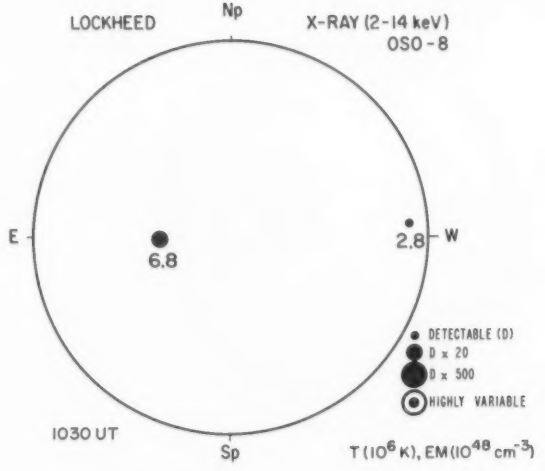

Hα
BOULDER
Np
SUNSPOTS
143
146
E
W
CORONA
NO DATA
1730 UT
Sp

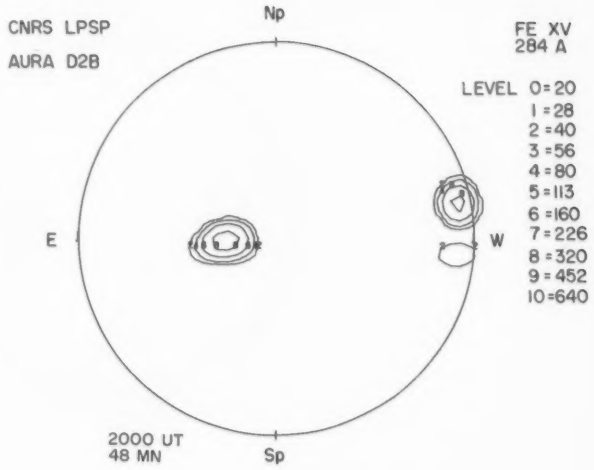

McMATH-HULBERT
Np
CALCIUM REPORT
149
146
143
150
148
147
E
W
Sp
1230 UT
GOOD D
43 3000 3.5
46 0800 3.0
47 0500 3.0

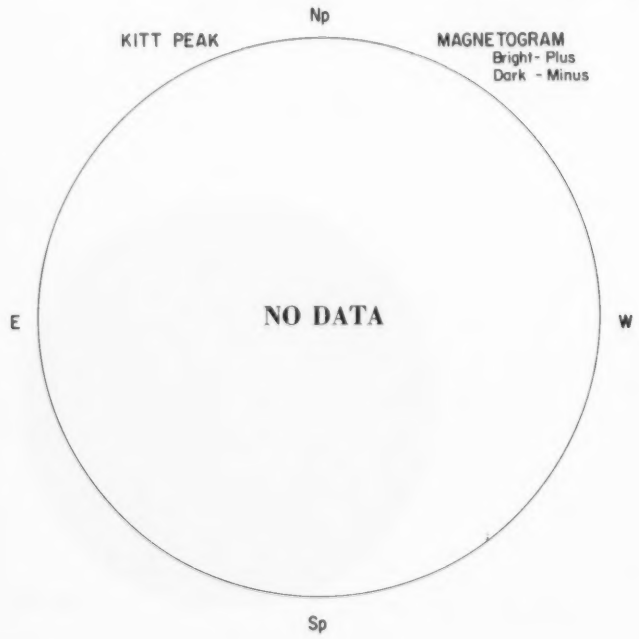

NELC LA POSTA
2.0 CM
Np
E
W
Sp
2205 UT
Ant. Temp. Unit 100°K

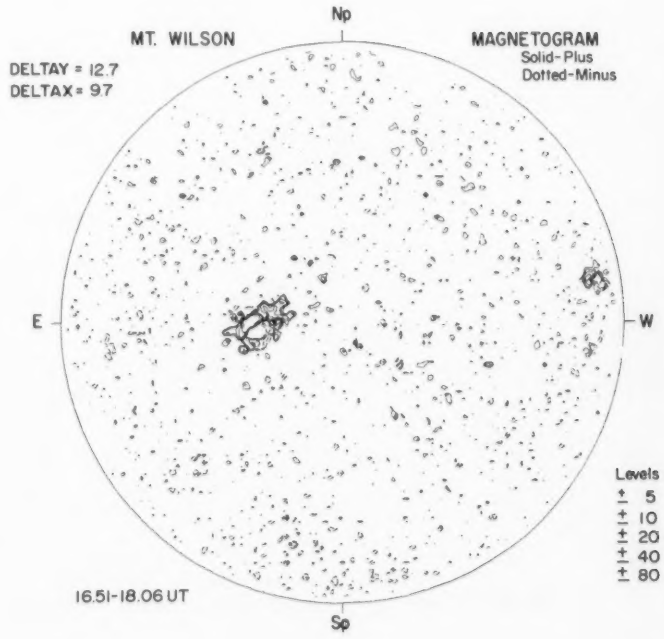

NELC LA POSTA
8.6 MM
Np
E
W
Sp
2027 UT
Ant. Temp. Unit 100°K

MARCH 29, 1976 (P = -26.06, B_o = -6.67, L_o = 69.47)

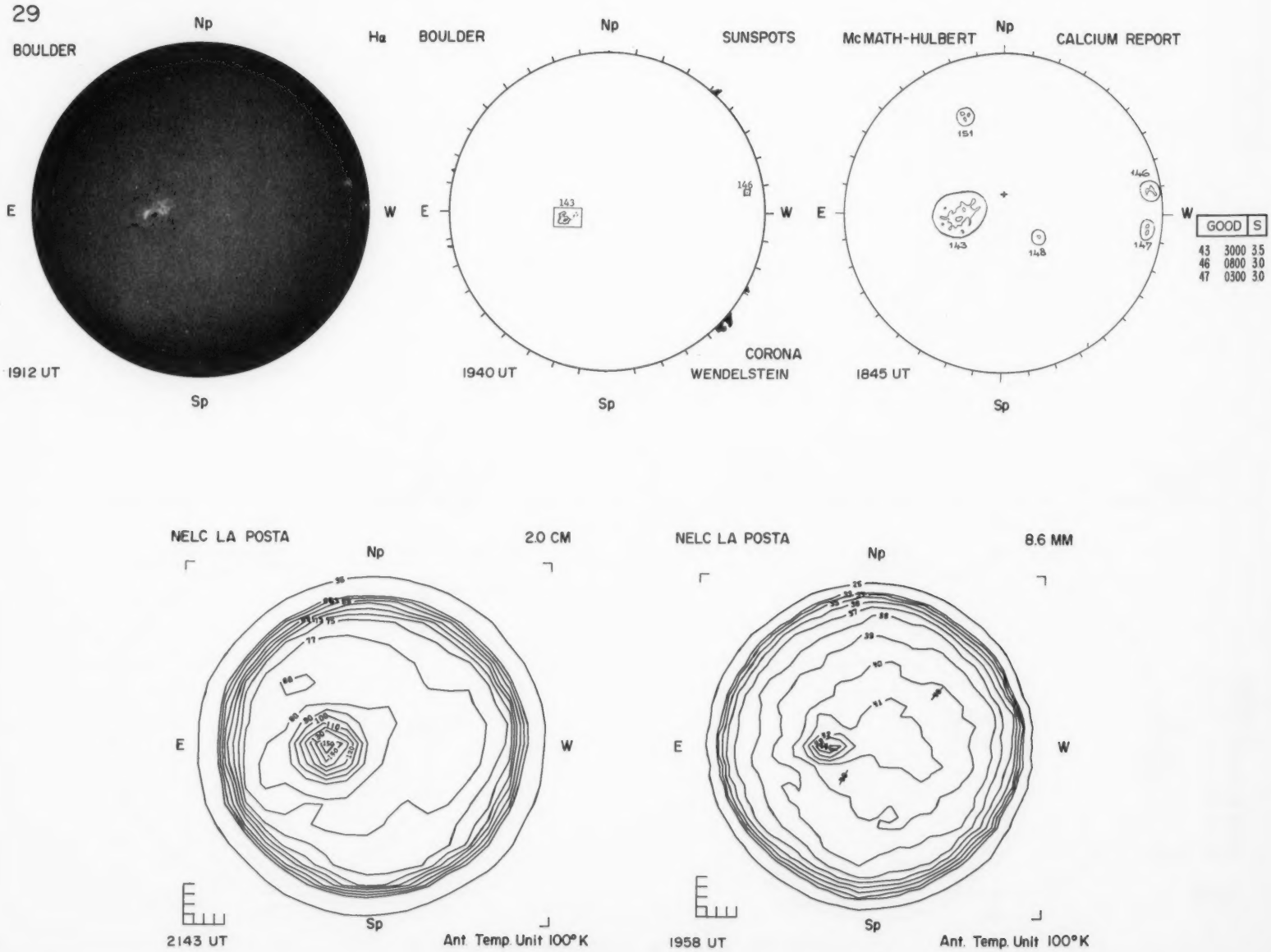




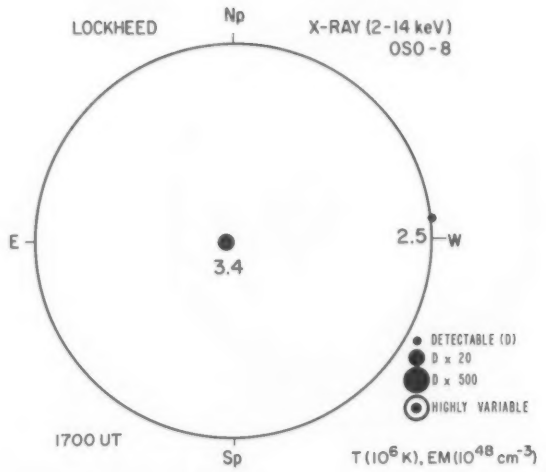


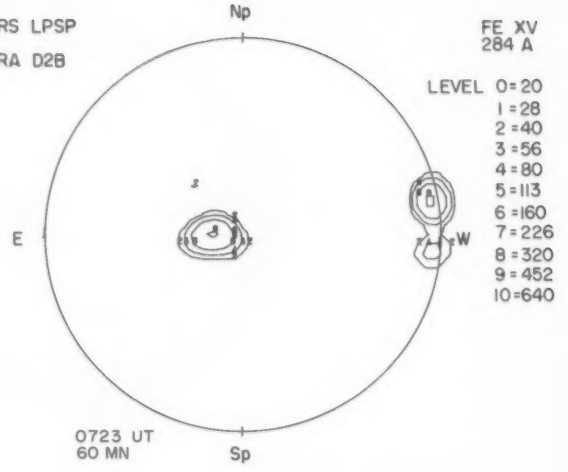


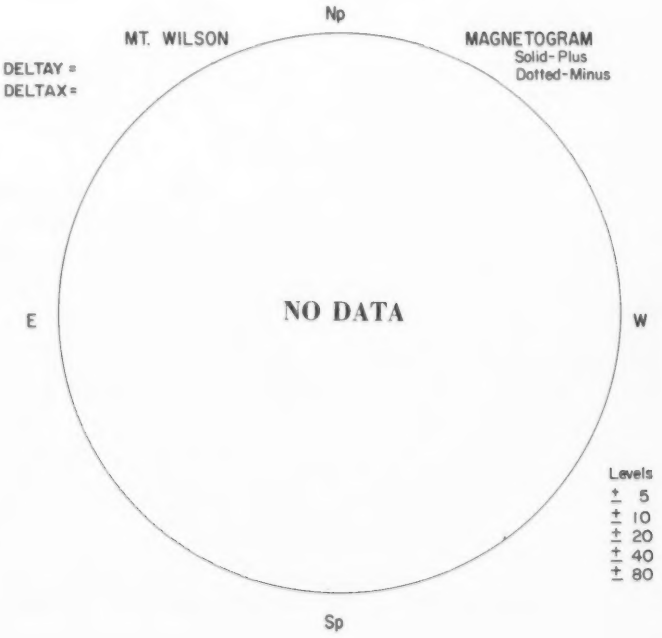
29


BOULDER
Np
Hα
E
W
Sp
1912 UT
BOULDER
Np
SUNSPOTS
E
W
143
146
CORONA
WENDELSTEIN
1940 UT
Sp
McMATH-HULBERT
Np
CALCIUM REPORT
E
W
151
146
143
148
147
1845 UT
Sp
GOOD S
43 3000 3.5
46 0800 3.0
47 0300 3.0
NELC LA POSTA
2.0 CM
Np
E
W
Sp
2143 UT
Ant. Temp. Unit 100°K
NELC LA POSTA
8.6 MM
Np
E
W
Sp
1958 UT
Ant. Temp. Unit 100°K

MARCH 30, 1976 (P = -26.12, B_o = -6.62, L_o = 56.28)

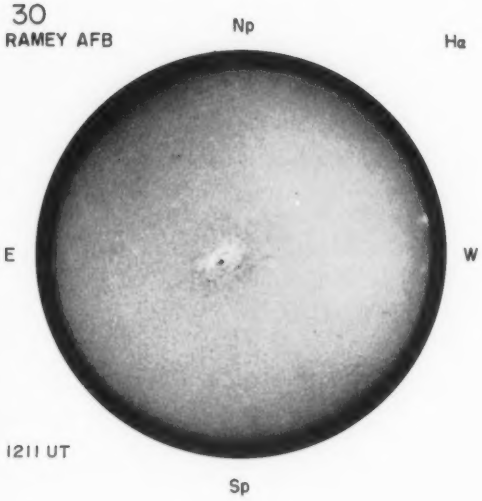






30

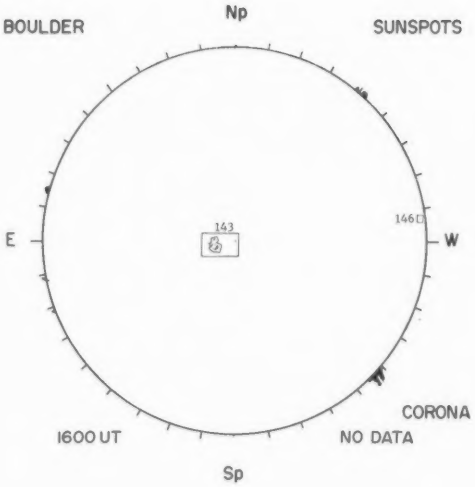
RAMEY AFB



Hα

1211 UT

BOULDER



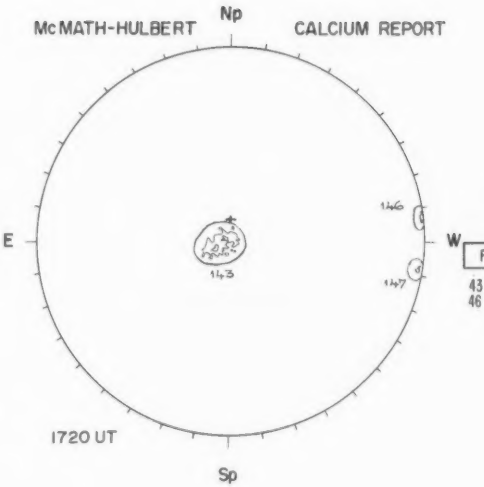
SUNSPOTS

CORONA

1600 UT

NO DATA

McMATH-HULBERT



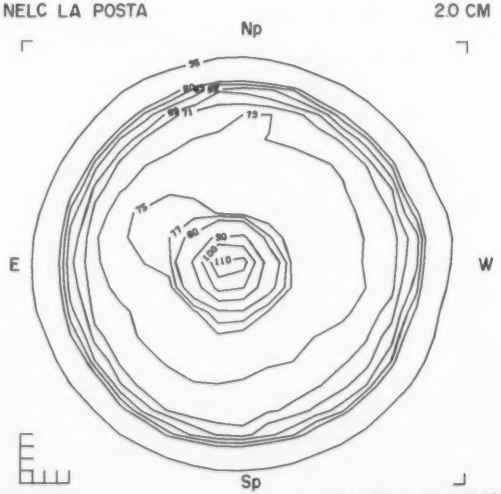
CALCIUM REPORT

FAIR		M
43	2700	35
46	0700	30

1720 UT

NELC LA POSTA

2.0 CM

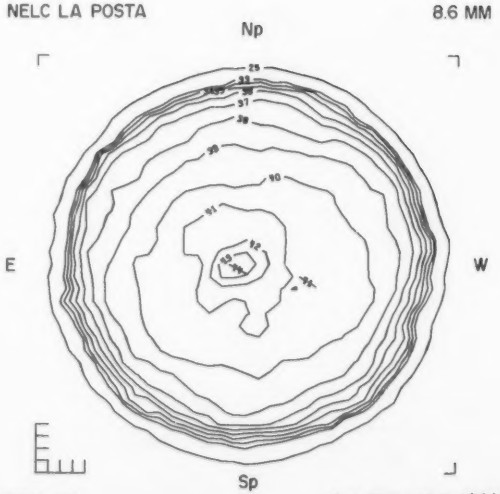


1919 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM

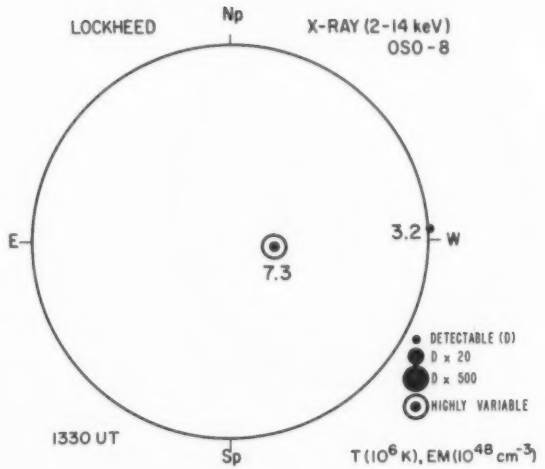


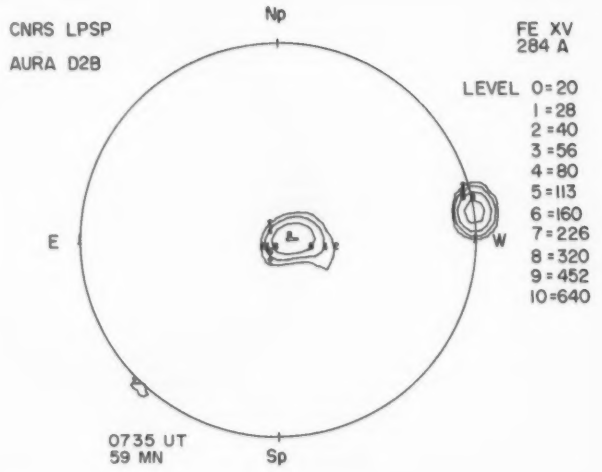
1755 UT

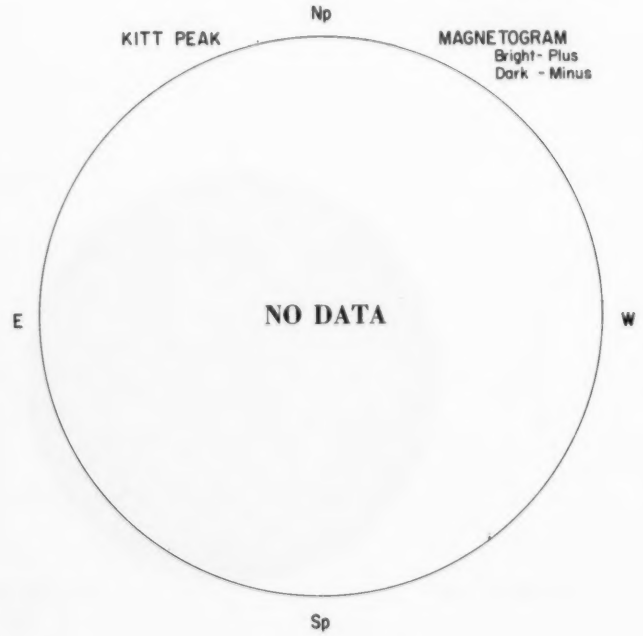
Ant. Temp. Unit 100°K

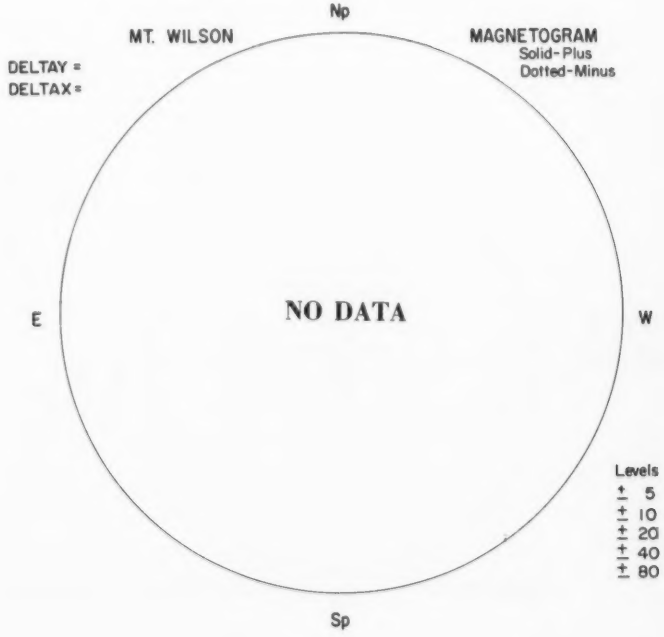
89
Mar 76

MARCH 31, 1976 (P = -26.17, B_o = -6.57, L_o = 43.09)



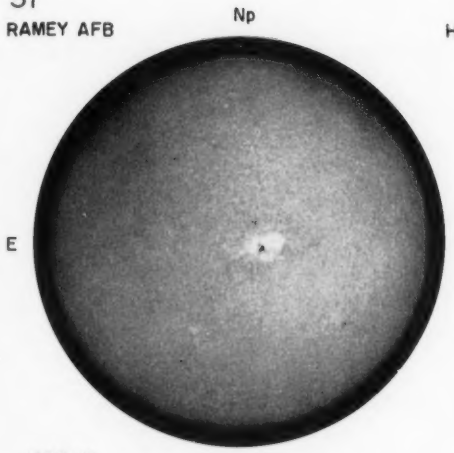






31

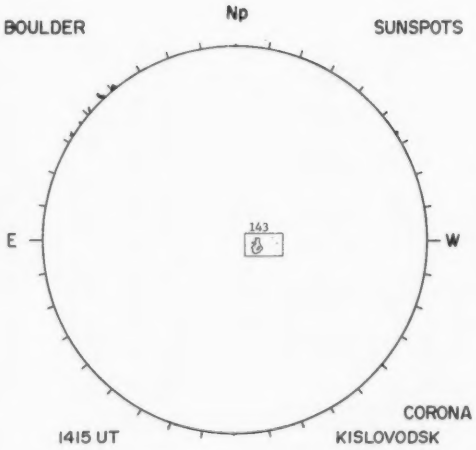
RAMEY AFB



Hα

1232 UT

BOULDER



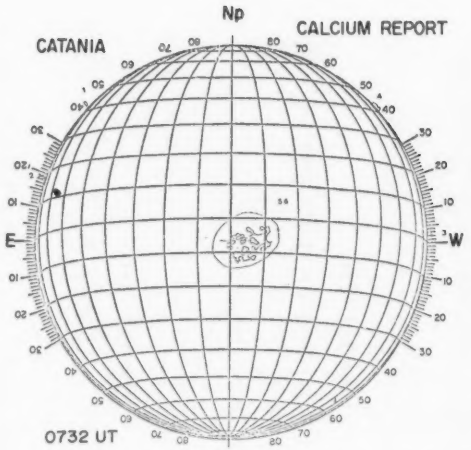
SUNSPOTS

CORONA

1415 UT

KISLOVODSK

CATANIA



CALCIUM REPORT

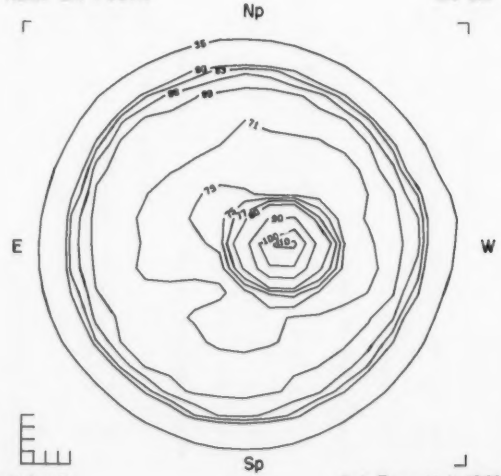
0732 UT

GOOD GD

56 5391 --

NELC LA POSTA

2.0 CM

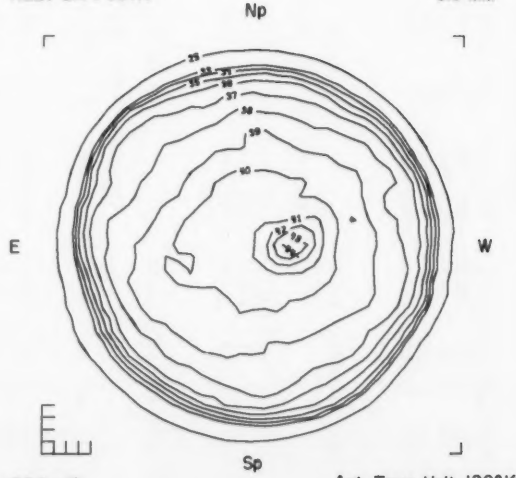


1910 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM



1738 UT

Ant. Temp. Unit 100°K

91
Mar 76

REGIONS OF SOLAR ACTIVITY

MARCH 1976

MCMATH REGION 14110 CMP DATE 2.3

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	2	27	14110	S06 E49	60	100	2.5		S08 E54				M	20	2	BXO

MCMATH REGION 14109 CMP DATE 3.3

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	2	26	14109	N06 E90	42	400	2.5									
76	2	27	14109	N07 E66	43	300	2.5									
76	2	28	14109	N06 E52	44	200	2.0									
76	2	29	14109	N07 E34	47	300	2.0									

MCMATH REGION 14117 CMP DATE 3.5

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	7	14117	N03 W57	46	100	1.0									
76	3	8	14117	N03 W69	48	200	1.0									

MCMATH REGION 14118 CMP DATE 3.6

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	5						19663	S03 W31	44	B					
76	3	6						19663	S03 W42	45	(BP)	3	B	10	4	BXO
76	3	7	14118	S06 W55	44	500	2.5	19663	S04 W55	45	(BP	2	B	10	2	AXX
76	3							19664	S08 W48	38	(AP)	2	B	10	1	AXX
76	3	8	14118	S05 W65	44	700	2.5	19663	S04 W70	48	(AP)	1	B	10	1	AXX
76	3	9	14118	S05 W79	45	500	2.5	19663	S04 W83	47	AP					

MCMATH REGION 14111 CMP DATE 4.3

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	2	27	14111	N02 E75	34	100	1.5									

MCMATH REGION 14114 CMP DATE 4.9

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	5	14114	S60 W09	27	100	1.0									

MCMATH REGION 14123 CMP DATE 6.3

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	11	14123	S04 W70	9	200	2.0									

MCMATH REGION 14115 CMP DATE 6.6

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	5	14115	N30 E14	4	100	1.5									

REGIONS OF SOLAR ACTIVITY

MARCH 1976

MCMATH REGION 14124 CMP DATE 7.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	11	14124	N14 W56	355	100	1.0									

MCMATH REGION 14119 CMP DATE 8.3

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	7	14119	S32 E07	342	300	2.0									
76	3	8	14119	S32 W04	343	300	2.0									
76	3	9	14119	S32 W15	341	200	1.0									
76	3	10	14119	S31 W31	340	100	1.0									

MCMATH REGION 14121 CMP DATE 8.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	10	14121	N37 W32	341	100	1.0									

MCMATH REGION 14122 CMP DATE 8.7

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	10	14122	N50 W25	337	100	1.0									

MCMATH REGION 14125 CMP DATE 8.7

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	11	14125	S02 W39	338	100	1.5									

MCMATH REGION 14126 CMP DATE 9.9

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	11	14126	N28 W23	322	100	2.0									

MCMATH REGION 14116 CMP DATE 11.7 RETURN OF REGION 14079 ROTATION 4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	5	14116	S10 E84	295	400	1.0									
76	3	7	14116	S10 E52	297	500	1.5									
76	3	8	14116	S10 E42	297	500	2.0									
76	3	9	14116	S11 E29	297	300	1.5									
76	3	10	14116	S10 E11	298	100	1.0									
76	3	11	14116	S10 W01	300	100	1.0									
76	3	12	14116	S10 W17	299	500	2.0									
76	3	13	14116	S10 W27	300	400	2.0									
76	3	14	14116	S10 W39	299	600	2.0	19666	S12 W36	295	(BF)	2	B	20	1	HSX
76	3	15	14116	S10 W52	299	500	2.0	19666	S11 W48	294	(AF)	2	R	10	1	AXX
76	3	16	14116	S11 W66	299	300	1.5									
76	3	17	14116	S11 W78	298	400	1.5									

MCMATH REGION 14128 CMP DATE 12.0

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	14	14128	N08 W34	294	200	1.0									

REGIONS OF SOLAR ACTIVITY

MARCH 1976

MCMATH REGION 14120 CMP DATE 12.1

				CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	9	14120	S33 E34	292	400	3.0	19665	S34 E32	292	(BF)	3	B	20	9	BXO
76	3	10	14120	S33 E17	292	500	2.5		S32 E20				B	20	11	BXI
76	3	11	14120	S34 E06	293	600	3.0	19665	S34 E06	293	(BF)	3	B	20	13	CRO
76	3	12	14120	S34 W10	292	500	3.0	19665	S34 W08	291	(BF)	3	B	50	9	BXI
76	3	13	14120	S34 W18	291	500	3.0	19665	S34 W18	290	(B)	2	R	50	10	CRO
76	3	14	14120	S34 W31	291	700	3.0	19665	S34 W3C	289	(BF)	2	B	20	5	BXO
76	3	15	14120	S34 W44	291	600	3.0	19665	S34 W42	288	AF					
76	3	16	14120	S35 W57	290	700	2.5									
76	3	17	14120	S35 W68	288	1000	2.5									
76	3	19	14120	S35 W90	284	200	1.0									

MCMATH REGION 14129 CMP DATE 12.8

				CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	14	14129	N13 W23	283	100	1.0									

MCMATH REGION 14131 CMP DATE 14.1

				CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	15	14131	N26 W19	266	200	1.0									

MCMATH REGION 14138 CMP DATE 16.5

				CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	19	14138	N29 W40	234	200	2.0									
76	3	20	14138	N29 W55	234	300	2.5									
76	3	21	14138	N29 W68	235	300	2.5									
76	3	22	14138	N30 W83	237	300	1.0									

MCMATH REGION 14132 CMP DATE 16.6

				CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	15	14132	S29 E13	234	100	1.5									

MCMATH REGION 14130 CMP DATE 17.1

				CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	14	14130	S46 E33	227	100	1.5									

MCMATH REGION 14133 CMP DATE 18.6

				CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	16	14133	N22 E26	207	100	1.0									

MCMATH REGION 14141 CMP DATE 18.7

				CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	22	14141	N37 W51	205	200	2.0									
76	3	23	14141	N37 W64	205	100	2.0									

REGIONS OF SOLAR ACTIVITY

MARCH 1976

MCMATH REGION 14127 CMP DATE 19.3

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	13	14127	N06 E87	186	300	1.5									
76	3	14	14127	N06 E69	191	400	2.0									
76	3	15	14127	N06 E54	193	400	2.0									
76	3	16	14127	N06 E38	195	500	3.5	19667	N05 E34	196	(BF)	3	B	20	18	BXO
76	3	17	14127	N06 E25	195	1200	3.5	19667	N05 E22	196	(B)	4	B	80	33	DRI
76	3	18						19667	N05 E10	196	(B)	4	B	170	33	DSI
76	3	19	14127	N05 W03	197	1700	3.5	19667	N05 W04	196	(BP)	4	B	220	26	EAI
76	3	20	14127	N05 W18	197	2000	3.5	19667	N05 W17	197	(BY)	5	B	240	13	EAI
76	3	21	14127	N05 W32	199	2200	3.0	19667	N05 W31	198	(D)	5	B	380	47	EAI
76	3	22	14127	N05 W43	197	2800	3.0	19667	N05 W44	197	(BP)	5	B	350	59	ESI
76	3	23	14127	N05 W57	198	3600	3.5	19667	N04 W59	199	(BP)	5	B	360	24	ESI
76	3	24	14127	N06 W72	200	4000	3.5	19667	N04 W76	201	BP		B	330	3	DSO
76	3	25	14127	N05 W88	204	2500	3.5									

MCMATH REGION 14134 CMP DATE 19.9

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	16	14134	S08 E45	188	100	1.0									
76	3	17	14134	S08 E32	188	400	2.5	19668	S07 E28	190	(BP)	2	B	10	2	BXO
76	3	18						19668	S08 E15	191	(BP)	4				
76	3	19	14134	S08 E04	190	500	2.5	19668	S08 E03	189	(B)	3	B	20	5	BXI
76	3	20	14134	S07 W12	191	500	2.5	19668	S08 W11	191	(B)	3	B	10	3	BXI
76	3	21	14134	S07 W25	192	500	2.5	19668	S09 W23	190	BF)	2	B	10	2	AXX
76	3	22	14134	S07 W36	190	700	2.5									
76	3	23	14134	S07 W50	191	800	2.5									
76	3	24	14134	S07 W64	192	700	2.0									
76	3	25	14134	S08 W78	194	700	1.5									

MCMATH REGION 14137 CMP DATE 20.5

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	17	14137	S14 E38	182	100	1.5									

MCMATH REGION 14135 CMP DATE 21.0

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	16	14135	S04 E57	176	100	1.0									

MCMATH REGION 14139 CMP DATE 21.5

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	19	14139	N30 E26	168	200	1.5									

MCMATH REGION 14144 CMP DATE 22.5

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	25	14144	N06 W40	156	100	1.0									
76	3	26	14144	N07 W55	156	100	1.5									

MCMATH REGION 14136 CMP DATE 22.8

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	17	14136	N28 E69	151	100	1.5									

REGIONS OF SOLAR ACTIVITY

MARCH 1976

MCMATH REGION 14142 CMP DATE 23.7

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	22	14142	S04 E15	139	100	1.0									

MCMATH REGION 14146 CMP DATE 24.8

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	26	14146	N07 W25	126	300	3.0	19670	N07 W24	125	(B)	3	B	10	8	BXO
76	3	27						19670	N06 W38	125	(BF)	3	B	20	10	BXO
76	3	28	14146	N07 W50	126	800	3.0	19670	N07 W51	124	(BP)	2	B	20	8	BXO
76	3	29	14146	N07 W68	127	800	3.0	19670	N07 W62	121	AF		B	10	1	AXX
76	3	30	14146	N07 W83	130	700	3.0	19670	N07 W75	123	AF		B	10	1	AXX

MCMATH REGION 14147 CMP DATE 24.9

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	26	14147	S08 W24	125	300	3.5	19671	S09 W24	125	(B)	3	B	20	9	BXO
76	3	27						19671	S08 W37	124	(B)	3	B	20	7	BXO
76	3	28	14147	S09 W50	126	500	3.0									
76	3	29	14147	S09 W67	126	300	3.0									
76	3	30	14147	S09 W80	127	400	2.0									

MCMATH REGION 14140 CMP DATE 25.2

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	19	14140	N17 E75	119	300	1.5									
76	3	20	14140	N17 E60	119	100	1.0									

MCMATH REGION 14148 CMP DATE 28.7

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	29	14148	S16 E03	73	100	1.0									
76	3	29	14148	S16 W13	72	100	1.0									

MCMATH REGION 14145 CMP DATE 28.8

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	25	14145	S05 E43	73	100	1.0									

MCMATH REGION 14149 CMP DATE 29.7

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	28	14149	N27 E15	61	100	1.0									

MCMATH REGION 14150 CMP DATE 29.7

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	29	14150	S12 E15	61	200	1.0									

REGIONS OF SOLAR ACTIVITY

MARCH 1976

MCMATH REGION 14143 CMP DATE 30.9 RETURN OF REGION 14118 ROTATION 2

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	24	14143	S06 E37	41	2000	4.0	19669	S07 E80	45	X		B	80	1	HSX
76	3	25	14143	S07 E72	44	2500	3.5	19669	S08 E70	43	(D)	5	B	440	9	DKC
76	3	26	14143	S07 E58	43	3000	3.5	19669	S08 E57	44	(D)	5	B	500	67	DKC
76	3	27						19669	S08 E44	43	(D)	4	B	620	31	DKC
76	3	28	14143	S07 E32	44	3000	3.5	19669	S08 E31	42	(D)	5	B	430	23	DKC
76	3	29	14143	S07 E15	44	3000	3.5	19669	S08 E18	41	D		B	560	34	DKC
76	3	30	14143	S07 E02	45	2700	3.5	19669	S08 E05	43	(D)	5	B	490	35	DKC
76	3	31						19669	S08 W08	43	(D)	5	R	580	17	DKC
76	4	1	14143	S07 W25	44	2500	3.0	19669	S08 W21	42	(D)	5				
76	4	2	14143	S07 W39	43	2600	3.0	19669	S08 W35	42	(D)	5	B	420	18	DKC
76	4	3	14143	S07 W48	43	2400	3.0	19669	S08 W49	42	(D)	5	B	280	9	DKC
76	4	4	14143	S07 W62		2200	4.0		S08 W66				B	460	16	DKC
76	4	5	14143	S07 W75		2000	4.0		S08 W79				B	340	5	DKC
76	4	6	14143	S07 W88		1000	3.0		S08 W92				B	100	1	HSX

MCMATH REGION 14151 CMP DATE 31.0

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	3	23	14151	N31 E16	43	200	1.0									

Note: Region 14127 is new plage that has developed in the location of old region 14091 of the preceding rotation.
New region 14134 has formed near the location of old 14098.
No calcium spectroheliograms were obtained at the McMath-Hulbert Observatory on March 1, 2, 3, 4, 6, 18, 27 & 31, 1976.
No sunspot observations were made at Mt. Wilson Observatory on March 1, 2 and 10, 1976.

DAILY CALCIUM PLAGE INDEX

MARCH 1976

YR	MO	DAY	INDEX	YR	MO	DAY	INDEX	YR	MO	DAY	INDEX
76	3	1	*	76	3	11	2.0	76	3	21	6.9
76	3	2	*	76	3	12	2.2	76	3	22	7.7
76	3	3	*	76	3	13	1.9	76	3	23	7.9
76	3	4	*	76	3	14	3.0	76	3	24	4.6
76	3	5	0.2	76	3	15	2.4	76	3	25	2.8
76	3	6	*	76	3	16	2.5	76	3	26	7.1
76	3	7	1.7	76	3	17	5.6	76	3	27	*
76	3	8	2.0	76	3	18	*	76	3	28	11.5
76	3	9	1.6	76	3	19	7.8	76	3	29	11.5
76	3	10	1.3	76	3	20	8.2	76	3	30	9.7
								76	3	31	*

* NO OBSERVATIONS

SUDDEN IONOSPHERIC DISTURBANCES

MARCH 1976

DAY	UNIVERSAL TIME START	END	MAX	IMP	WIDE SPREAD INDEX	NUMBER OF STATION REPORTS BY TYPE SWF	SCNA	SEA	SPA	LF-SPA	SES	SFD	KNOWN FLARE	McMATH REGION
20	0749	0833	0754	1-	1				1				0754E	14127
20	1802	1815	1804	1-	3	1		2		9			1752	14127
20	2152	2239D	2159	1	5	1		1	1	1	10		2151	14127
20	2240E	2317	2244	1-	3				1		3		NF	
21	0130	0306	0156	1	5	1			3		1		0130	14127
21	0508	0605	0517	1-	3				2				0502	14127
21	0755	0946	0814	1	5	3	1	5	5		2		0801E	14127
21	0948	1010	0951	1+	3	1			2		1		0949	14127
21	1115	1150	1120	2	3	1		1	2		2		1111	X-RAY
21	1158	1210	1201	1-	1			1					*	
21	1249	1340	1307	2	5	4	1	4	4		5		1247	X-RAY
21	1842	1920	1850	2	5	3	1	2	2		13		1838	14127
21	1929	1940	1932	1-	3						2		1930	14127
21	2231	2332D	2241	1-	5	2		1	3		10		2231	14127
22	0119	0214	0124	1-	3				3				0121E	14127
22	0419	0546	0429	1+	3	1			2				0427E	14127
22	2158	2307	2240	1	5	1		1	1	1	12		2156	14127
22	2215E	2230	2215	1-	1						1		2213E	14127
23	0415	0604	0436	1-	3				2				0417	X-RAY
23	0839	1020	0856	3	5	6	1	4	5		1		0837	14143
24	0016	0054	0020	1+	5	2			2	1	6		0017	14127
24	1252U	1328	1259	1-	1			1					*	
24	1836	1916	1841	1-	5	1				1	9		NF	
25	0019	0114	0023	1-	5	1			3		4		0019	14127
25	0520E	0613D	0525	1-	1				1				*	
25	0613E	0650	0618	1-	1				1				0614	14143
25	0705	0730	0712	1	5	1			3		1		0704	14143
25	1136	1230	1159	1-	3	1		3	2		2		1134	X-RAY
25	1152	1350	1202	1	1	1							1154	14143
25	1325U	1355	1330	1	1	1							1322E	14143
25	1720	1740	1727	1	5	2		2	3	1	11		1712	X-RAY
25	2056	2123	2058	1-	5	1				1	10		NF	
25	2159	2322	2219	1-	5				1	1	10		2154	X-RAY
26	0001	0206	0008	1	5			2	2		2		0001	14143
26	0720	0805	0724	1	5			2	2		2		0721	14143
26	0837	0845	0839	1-	5	1	1		2		1		0831	14143
26	1038	1055	1043	1+	3	1			1		1		NF	
26	1441	1500	1446	1	5	2		7	4	1	7		1439	14143
27	0203	0307	0208	1-	3				3				0201	14143
27	0321	0412	0326	1-	3				2				0318	14143
27	0602	0626D	0606	1-	1				1				0550	14143
27	0626E	0725	0631	1-	5				2		1		0628E	14143
27	0713	0745	0726	1-	1				1				0720	14143
27	1203	1248	1211	2-	5	2		3	4		3		1204	14143
27	1805	1915	1814	1	5		1	1			4		1803	14143
27	2044	2123	2052	1-	5	1			1		8		2043	14143
27	2330	2338D	2338	1-	1	1							2333E	14143
27	2359	0034	0007	1-	1				1				2358E	14143
28	0553	0747	0601	1	5	1		1	3		2		0555	14143
28	1919	2054	1936	1+	5	2		1	1	1	11		1912	14143
30	0354	0452	0402	1-	1				1				0353E	14143
30	0526	0609	0535	1-	1				1				0531E	14143
31	0453	0640	0500	1-	3	2			2				0456E	14143
31	0953	1002	0956	1-	1			1					0950	14143
31	1156	1245	1213	1	3				2		1		1202E	14143

SUDDEN IONOSPHERIC DISTURBANCES

MARCH 1976

PERIODS OF NO OBSERVATIONS:

DATE	TIME (UT) and STATION
01-06	0000-2400 A33
01-31	0000-2400 A29
02-04	0022-1700 MC
02	0310-1314 UM (10 kHz)
03	0000-2400 A41, 2020-2117 UM (10 kHz)
04-11	0000-2400 A40
04	0040-0144 UM (13 kHz)
05-07	1727-1626 MC
05	2009-2125 UM (10 kHz)
06	2047-2400 UM (10 kHz)
07	0000-2400 A41, 0000-0112 UM (10 kHz), 0533-0707 UM (10 kHz), 2005-2146 UM (10 kHz), 2042-2145 UM (13 kHz)
08	2010-2128 UM (10 kHz), 2038-2147 UM (13 kHz)
09	2016-2149 UM (10 kHz), 2035-2123 UM (13 kHz)
10	1950-2137 UM (10 kHz)
11-21	0000-2400 A36
11	1154-1311 UM (13 kHz), 1204-1352 UM (10 kHz), 2025-2132 UM (10 kHz), 2036-2132 UM (13 kHz), 2242-2250 TM
12	0148-0243 UM (10 kHz), 0805-0909 UM (10 kHz), 2015-2147 UM (10 kHz), 2033-2145 UM (13 kHz)
13	0216-0258 TM, 2012-2128 UM (10 kHz), 2045-2143 UM (13 kHz)
14	2016-2125 UM (10 kHz)
15	0000-2400 A1
16	0131-0307 UM (13 kHz), 2251-2316 UM (10 kHz)
17	1328-1354 TM, 1450-1651 UM (10 kHz), 2034-2120 UM (13 kHz)
18	1223-1334 UM (10 kHz), 1950-2126 UM (10 kHz), 2030-2120 UM (13 kHz), 2100-2118 TM
19-21	0000-2000 A35
19-28	0000-2400 A28
19	1223-1534 Um (10 kHz), 2008-2120 UM (13 kHz)
20	0655-0805 UM (10 kHz), 2008-2227 UM (10 kHz)
21	0233-0320 UM (10 kHz), 2030-2133 UM (10 kHz)
23	2240-2345 UM (10 kHz)
24	0410-0655 UM (10 kHz), 2005-2113 UM (10 kHz)
25	1626-1716 TM
28	0000-2400 A1
30	0000-2400 A41, 0137-0505 UM (10 kHz), 2036-2128 UM (13 kHz)
31	0000-2400 A35, 0000-2400 A4, 0000-2400 A41

STATIONS REPORTING FOR MARCH 1976

AAVSO (A1, A4, A19, A21, A28, A29, A30, A31, A33, A34, A35, A36, A37, A40, A41) (SES)
(A1, A26, A31, A32) (SEA) (A31) (SWF)
BEARLY (BY) (SWF)
DARMNSTADT (DA) (SWF)
DEBRE ZEIT (DE) (SPA)
HERMANUS (HS) (SEA)
HERSTMONCEUX (HC) (SEA)
HIRAISO (HI) (SWF)
HOBART (TA) (SEA)
HUANCAYO (HU) (SWF)
INUBO (IN) (SPA)
KASUAGE (KA) (SPA)
KUHLUNGSBORN (KU) (SEA, SPA)
MANILA (MA) (SWF, SPA)
MCMATH (MC) (SWF, SCNA)
NEUSTRELITZ (NU) (SWF, SCNA)
PANSKA VES (PU) (SWF, SEA, SES)
POITIERS (PO) (SEA)
PRESTON (LO) (SEA)
SAO PAULO (UM) (SES, SPA)
SOFIA (SF) (SES)
SOMERTON (SO) (SWF)
ST CLOUD (SC) (SES)
TABLE MOUNTAIN (TM) (SPA)
UPICE (UI) (SEA)

SID's BY McMATH REGION

MARCH 1976

DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
REGION																															
27																				3	7	4		1	1						
43																							1		4	4	10	2		2	3
X-RAY																					2		1		3						
UNKNOWN																				1				1	1	1					
NO FP																					1			1	1						

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS
MARCH 1976

MAR 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
01	0000	0745	CULG										
	0000	0954	MANI										
	0000	0941	MANI										
	0630	1650	DURN										
	1123	2229	SGMR										
	1300	2400	BOUL										
	1347	2345	HARV										
	2045	2210	CULG										
	2213	2400	MANI										
02	0000	0947	MANI										
	0000	0744	CULG										
	0000	0100	BOUL										
	0630	1650	DURN										
	1121	2230	SGMR										
	1330	2400	BOUL										
	1346	2345	HARV										
	2044	2400	CULG										
	2213	2400	MANI										
03	0000	0953	MANI										
	0000	0744	CULG										
	0000	0100	BOUL										
	0628	1650	DURN										
	1119	2232	SGMR										
	1330	1900	BOUL										
	1346	2345	HARV										
	2044	2400	CULG										
	2200	2400	BOUL										
	2212	2400	MANI										
04	0000	0744	CULG										
	0000	0100	BOUL										
	0630	1652	DURN										
	1118	2233	SGMR										
	1330	2400	BOUL										
	1347	2345	HARV										
	2044	2400	CULG										
	2212	2400	MANI										
05	0000	0954	MANI										
	0000	0743	CULG										
	0000	0100	BOUL										
	0625	0829	DURN										
	1050	1654	DURN										
	1116	2234	SGMR										
	1330	2400	BOUL										
	1334	2345	HARV										
	2043	2400	CULG										
	2212	2400	MANI										
06	0000	0954	MANI										
	0000	0726	CULG										
	0000	0100	BOUL										
	0623	1651	DURN										
	0738	0743	CULG										
	1114	2235	SGMR										
	1330	2400	BOUL										
	1335	2345	HARV										
	2043	2400	CULG										
	2209	2400	MANI										
07	0000	0955	MANI										
	0000	0955	MANI										
	0000	0743	CULG										
	0000	0100	BOUL										
	0621	1651	DURN										
	1113	2236	SGMR										
	1330	2400	BOUL										
	1338	2345	HARV										

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS
MARCH 1976

MAR 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
07	2043	2400	CULG										
	2209	2400	MANI										
08	0000	0955	MANI										
	0000	0743	CULG										
	0000	0100	BOUL										
	0628	1654	DURN										
	1111	2238	SGMR										
	1330	2400	BOUL										
	1337	2345	HARV										
	2043	2400	CULG										
	2208	2400	MANI										
09	0000	0955	MANI										
	0000	0742	CULG										
	0000	0100	BOUL										
	0617	0622	DURN										
	0633	1654	DURN										
	1109	2239	SGMR										
	1330	2400	BOUL										
	1332	2345	HARV										
	2043	2400	CULG										
	2207	2400	MANI										
10	0000	0956	MANI										
	0000	0742	CULG										
	0000	0100	BOUL										
	0614	1651	DURN										
	0624	1248	WEIS										
	1108	2240	SGMR										
	1306	1648	WEIS										
	1332	2345	HARV										
	2042	2400	CULG										
	2207	2400	MANI										
11	0000	0956	MANI										
	0000	0733	CULG										
	0609	1654	DURN										
	0612	0715	WEIS										
	0804	1644	WEIS										
	1106	2241	SGMR										
	1333	2345	HARV										
	1530	2400	BOUL										
	2042	2400	CULG										
	2206	2400	MANI										
12	0000	0956	MANI										
	0000	0742	CULG										
	0000	0100	BOUL										
	0608	1654	DURN										
	0614	1057	WEIS										
	1104	2242	SGMR										
	1108	1645	WEIS										
	1300	2400	BOUL										
	1332	2345	HARV										
	2042	2400	CULG										
	2205	2400	MANI										
13	0000	0957	MANI										
	0000	0100	BOUL										
	0000	0741	CULG				0307.5						IIIB,W
	0607	1651	DURN										
	0615	1215	WEIS										
	1102	2244	SGMR										
	1300	2400	BOUL										
	1537	2345	HARV										
	2041	2400	CULG										
	2205	2400	MANI										
14	0000	0004	MANI										

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS
MARCH 1976

MAR 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
14	0000	0741	CULG										
	0000	0100	BOUL										
	0030	0541	MANI										
	0606	0709	DURN										
	0610	0958	MANI										
	0610	0950	WEIS										
	0716	1653	DURN										
	1101	2245	SGMR										
	1300	2400	BOUL										
	1331	2345	HARV										
	2041	2400	CULG										
	2204	2400	MANI										
15	0000	0959	MANI										
	0000	0741	CULG										
	0000	0100	BOUL										
	0603	1653	DURN										
	0652	0941	WEIS										
	1020	1336	WEIS										
	1059	2246	SGMR										
	1300	2400	BOUL										
	1333	2345	HARV										
	1409	1424	WEIS										
	1629	1644	WEIS										
	2041	2400	CULG										
	2204	2400	MANI										
16	0000	1001	MANI										
	0000	0740	CULG										
	0000	0130	BOUL										
	0602	0807	WEIS										
	0602	1714	DURN										
	1011	1649	WEIS										
	1057	2247	SGMR										
	1300	2400	BOUL										
	1333	2345	HARV										
	2204	2400	MANI										
	2040	2400	CULG	2330	2400								IS,W
17	0000	0740	CULG	0000	0740		0427	0740					IS,W
	0000	1002	MANI										
	0000	0130	BOUL										
	0555	1717	DURN										
	0639	0815	WEIS										
	0851	1450	WEIS										
	1055	2248	SGMR										
	1332	2345	HARV										
	1608	1649	WEIS										
	2040	2400	CULG	2040	2400		2040	2400					IS,W
	1300	2400	BOUL							2202.6	2202.9	1	III
	2204	2400	MANI										
			CULG	2211.5	2212.5	1	2211.5	2212.5	1	2211.5	2212.5	1	IIIG
			BOUL				2211.9	2212.5	1	2211.9	2212.5	1	III
			BOUL				2221.1	2221.7	1	2221.1	2221.7	1	III
			CULG				2221	2222	1	2221	2222	1	IIIG
18	0000	0740	CULG	0000	0740		0000	0740					IS,W
	0000	1002	MANI										
	0000	0130	BOUL										
			CULG				0350	0355	1				IIIG
	0552	1718	DURN										
			CULG				0713	0720	1				IIIG
	0743	1649	WEIS										
	1054	2248	SGMR										
	1300	2400	BOUL										
	1333	2345	HARV										
	2040	2400	CULG	2040	2400	1	2040	2400	1				IS
	2203	2400	MANI										
19	0000	1002	MANI										

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS
MARCH 1976

MAR 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
19	0000	0740	CULG	0000	0740	1	0000	0740	1				IS
	0000	0130	BOUL										
			CULG				0007		1				IIIB
			CULG				0249		1				IIIB
	0550	0615	DURN										
	0559	0752	WEIS				0620	0727	2				I
			CULG				0645	0740					IIIN,W
	1052	2251	SGMR										
	0633	1721	DURN				1130	1721 D	1				IN
	1300	2400	BOUL										
	1332	2345	HARV				1819	2150	1				IN
	2040	2400	CULG	2040	2400	2	2040	2400	2				IS,DC
			HARV				2150	2345	1				I
	2202	2400	MANI										
20	0000	0740	CULG	0000	0415	2	0000	0415	2				IS,DC
	0000	0130	BOUL										
			CULG				0200	0605					IIIN,W
			CULG	0204	0204.5	1	0203	0205.5	1				IIIG,V
			CULG	0205.5	0206	1							IIIG
			CULG				0205	0230	2				II, H
	0000	1003	MANI							0207.9	0214.3	3	IIG
			MANI							0215.5	0215.7	3	III
			CULG	0415	0740	1	0415	0740	1				IS,DC
	0548	1728	DURN				0548 E	1728 D	1				IN
			CULG				0605	0740	1				IIIN
			DURN	0750.1	0750.6	2							IIIG
			DURN	0753.2	0753.2	1							III
			DURN	1003.8	1004.2	1	1004.0	1004.2	1				IIIG
	1318	2345	HARV				1330	1718	1				IN
	1300	2400	BOUL				1336	1827	1				IS
			BOUL							1351	1436	1	CONT
			BOUL				1633.8	1955.0	1	1633.8	1955.0	1	IIIN
	1050	2252	SGMR							1731.3	1731.5	1	III
			HARV				1731	1732	2	1731	1732	2	IIIG
			HARV				1745	1747	1	1745	1747	1	IIIGG
			BOUL							1745	2256.4	1	CONT
			HARV				1800	1801	1	1800	1801	1	IIIG
			HARV				1805	1808	2	1805	1807	2	IIIGG
			HARV				1811	1812	1				IIIG
			HARV				1900	1901	1				IIIG
			HARV				1911	2345	1				IN
			HARV				1932	1933	2	1932	1933	2	IIIG
			HARV				1954	1955	2				IIIG
			CULG				2040	2400					IIIS,W
	2040	2400	CULG	2040	2400	1	2040	2400	1				IS
			CULG				2105		1				IIIB
			CULG				2109	2112	2				IIIG,U
			HARV				2110	2111	2	2110	2111	2	IIIG
			CULG	2153	2157	1							FAST DRIFT
	2204	2400	MANI										
			CULG				2255.5	2311	1	2257	2311	1	IIIGG
			BOUL				2256.4	2257.8	2	2256.4	2257.2	2	III
			HARV				2257		2				IIIG
			CULG				2257	2314	1	2259	2310	1	II
			BOUL				2258.0	2320	2	2258.0	2320	2	CONT
			BOUL				2320	2400	1				IS
			BOUL							2320	2400	1	CONT
21			BOUL				0000	0048	1				IS
	0000	0130	BOUL							0000	0052	1	CONT
	0000	0740	CULG	0000	0155	1	0000	0155	1				IS,DC
			CULG				0000	0740	1				IIIS
			CULG	0155	0740	2	0155	0740	2				IS,DC
			CULG				0207	0208	2				IIIG
			CULG				0313		1				IIIB,V
	0546	1729	DURN	0546 E	1729 D	2	0546 E	1729 D	2				IN
			CULG				0705	0740	2				IIIS
			DURN	0756.4	0759.5	1	0756.4	0759.5	2				IIIGG
	0000	1005	MANI							0758.8	0800.2	1	IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS
MARCH 1976

MAR 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
21	1048	2253	SGMR							1227.8	1228.6	2	III
			SGMR							1252.0	1258.1	1	IIIG
	1300	2400	BOUL				1315	2400	1				IS
			BOUL				1330	2400	1	1330	2400	1	CONT
	1319	2345	HARV				1331	1630	1				IN
			SGMR							1403.3	1404.1	1	III
			HARV	1843	1845	1	1841	1849	2	1841	1846	1	IIIGG
			HARV				2002	2055	1				IN
	2040	2147	CULG	2040	2147	2	2040	2147	2				IS
			CULG				2040	2147	1				IIIS
			CULG				2057	2058	1	2057.5	2058	1	IIIG,U
	2205	2400	CULG				2205	2400	1				IS
			CULG	2232.5	2234	1	2232.5	2235	1	2233	2236	1	IIIG,V
			BOUL				2232.6	2236.6	3	2232.6	2336.6	3	IIIG
			HARV	2232	2234	2	2232	2235	3	2233	2235	3	IIIGG,V
	2202	2400	MANI							2233.5	2234.6	3	III
			SGMR							2233.7	2235.1	2	V
			CULG				2302.5	2303	1	2302.5	2303	1	IIIG
22	0000	0730	CULG				0000	0730	1				IIIN
			CULG				0000	0200	1				IS
	0000	0130	BOUL				0000	0050	2				IS
			BOUL							0000	0050	1	CONT
			BOUL				0039.0	0041.2	2	0039.0	0041.2	2	IIIG
	0000	1005	MANI							0039.0	0040.0	3	III
			CULG				0039	0040	1	0039	0041	1	IIIG,V,U
			CULG				0117.5	0119	1				IIIG
			MANI							0117.5	0117.8	1	III
			MANI							0229.2	0230.1	2	III
			CULG				0229	0230	1	0229	0230	1	IIIG
			CULG	0419	0422	1	0419	0422	1				IIIG
			CULG				0550	0739	1				IS
			CULG	0624			0624						IIIB,W
			CULG				0712	0722	1				IIIGG
	0550	1730	DURN	0807.4	0809.7	3							IIIG
	1047	2254	SGMR										
	1239	1700	WEIS										
	1320	2345	HARV				1320	1532	1				IN
	1300	2400	BOUL							1406.7	2400	1	CONT
			HARV				1511	1604	1				IIIN
			CULG	2200	2400		2200	2300					IS,W
	2201	2400	MANI										
	2039	2400	CULG				2202.5	2205	1				IIIG
			CULG				2254		1				IIIB
			CULG				2257.5	2302	1				IIIG
			BOUL				2258.2	2302.0	2	2258.2	2302.0	2	IIIG
23	0000	0130	BOUL							0000	0035	1	CONT
	0000	0738	CULG				0000	0738	1				IIIN
			CULG	0115.5	0117	1							FAST DRIFT
			CULG				0142		1				IIIB,U
			CULG				0310	0738					IS,W
			CULG				0512	0513	1				IIIB
			CULG				0635	0715	1				IIIS,U
	0546	1637	DURN	0841.3	0856	2	0841.6	0858	2				IV
			DURN	0941.3	0847.0	2	0841.3	0847.0	2				IIIGG
	0000	1007	MANI							0842.2	0856.8	3	CONT
	0900	1230	DWIN				0900	1230	1				IS
			MANI							0904.1	0905.4	2	III
			DURN	0951.2	0951.6	1							IIIG,RS
			DURN	1023.7	1030.7	1							IIIG
			DURN				1250.4	1250.7	1				IIIG
	1300	2400	BOUL				1325	2400	1	1325	2400	1	CONT
			DURN	1549.1	1549.2	1	1549.1	1549.2	1				III,RS
	1045	2255	SGMR							1549.3	1549.8	1	III
			BOUL				1549.4	1550.0	1	1549.4	1550.0	1	III
	1317	2345	HARV				1549	1550	1	1547	1550	1	IIIG
			HARV				1749	1750	1				U
			CULG				2039	2400	1				IIIN
	2039	2400	CULG	2039	2400		2039	2400					IS,W

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS
MARCH 1976

MAR 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
23	2201	2400	MANI										
			CULG				2320	2323	1				IIIG,V,U
			BOUL				2321.1	2324.2	1	2321.1	2324.2	1	IIIG
24			BOUL							0000	0050	1	CONT
	0000	0130	BOUL				0000	0103	1				IS
	0000	0739	CULG	0000	0739		0000	0350					IS,W
			CULG				0000	0739	1				IIIN
	0000	1007	MANI										
			CULG				0115	0116	1				IIIG
			CULG				0346.5		1				IIIB
			CULG				0356	0357	2				IIIG
			CULG				0729		1				IIIG,U
	0844	1504	DWIN				0844	1504	1				IS
	0621	1730	DURN	1233.3	1233.3	1							III
	1318	2345	HARV				1326	1337	1				I
	1300	2400	BOUL				1336.4	1337.3	1	1336.4	1337.3	1	III
			BOUL				1343.3	1343.9	1	1343.3	1343.9	1	III
			DURN	1525.7	1526.2	1	1525.7	1526.1	1				IIIG
			BOUL				1553.6	1554.5	1	1553.6	1554.5	1	IIIG
			BOUL							1621.7	2400	1	CONT
			DURN	1652.2	1652.2	1	1652.2	1652.2	1				III
			HARV	1658	1659	1	1658	1700	2				IIIG
			DURN	1659.0	1659.4	2	1659.0	1659.4	2				IIIG
	1610	1705	WEIS				1659.0	1659.4	2				IIIG
	1416	1435	WEIS				1659.0	1659.4	2				IIIG
			DURN				1707.5	1707.7	1				IIIG
			BOUL				1716.7	1718.0	2				IIIG
			BOUL				1739.7	1740.0	1	1739.7	1740.0	1	III
			BOUL				1751.4	1752.6	1	1751.4	1752.6	1	IIIG
			BOUL				1758.8	1800.5	2	1758.8	1800.5	2	IIIG
			HARV				1816	1817	1				IIIG
			HARV				1839	1840	2	1839	1840	2	IIIG
			HARV				1851	1853	2	1851	1853	2	IIIG
			BOUL				1853.4	1853.8	1				IIIG
	1043	2256	SGMR							1858.9	1859.8	1	V
			HARV				1859	1900	3	1859	1900	3	IIIG,V
			BOUL				1906.7	1908.1	2	1906.7	1908.1	2	III
			HARV				1951	1954	1				IIIG
			SGMR							2006.8	2007.7	1	III
			HARV				2007	2008	3	2007	2008	1	IIIG
	2039	2400	CULG				2039	2400	1				IS
			CULG				2117	2400	1				IIIN
			BOUL				2203.6	2204.1	1	2203.6	2204.1	1	III
			CULG				2203	2204	1				IIIB
			CULG				2212		1				IIIB,U
			BOUL				2218.1	2219.8	2	2218.1	2219.8	2	III
			HARV				2218	2219	2	2218	2219	2	IIIG
			CULG				2218	2220	2				IIIG,U
			CULG	2252	2300	2	2252	2300	2	2252	2300	2	IIIGG,V
			BOUL				2253.6	2359.5	2	2353.6	2359.5	2	IIIGG
			HARV				2257	2259	2	2258	2259	2	IIIG
	2200	2400	MANI							2258.3	2259.1	1	III
25	0000	0735	CULG				0000	0315	1				IIIN
			CULG				0000	0315	1				IN
	0000	0130	BOUL							0000	0040	1	CONT
			BOUL				0038.0	0040.0	2	0038.0	0040.0	2	IIIG
			CULG				0038	0040	1				IIIG,V
	0000	1007	MANI							0039.0	0040.2	1	III
			CULG				0127	0132	1				IIIG
			CULG				0315	0735	1				IS
			CULG				0315	0735	1				IIIS
	0541	1730	DURN	0541 E	1730 D	3	0541 E	1730 D	3				IC,N,DC
			DURN	0611.1	0612.9	3							IIIGG
	0549	1705	WEIS	0611.4	0611.7	3							IIIG
			DURN	0703.3	0705.8	3							IIIGG
	1019	1447	DWIN				1019	1447	1				IS
			WEIS				1023.4	1023.8	1				IIIG
			WEIS				1031.5	1031.6	1				IIIB

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS
MARCH 1976

MAR 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
25			WEIS				1119.0	1119.1	1				IIIB
			DURN	1140	1450	3	1140	1450	3				IV
	1042	2257	SGMR							1222.1	1222.8	1	III
			WEIS				1222.2	1222.3	1				IIIB
			SGMR							1240.8	1525.0	2	I
	1300	2400	BOUL				1304.2	1517	2	1304.2	1517	2	IV
			WEIS				1308.0	1330.0	3				IVP
			DWIN				1315.0	1315.6	2				IIIG
			DWIN				1317.8	1318.6	1				IV
			DWIN				1320.0	1320.5	1				IV
	1317	2115	HARV				1321	1355	1				I
			WEIS				1511.6	1511.7	1				IIIB
			BOUL				1554.5	1554.7	1	1554.5	1554.7	1	III
			BOUL				1614.1	1614.5	1	1614.1	1614.5	1	III
			WEIS				1614.2	1614.3	1				IIIB
			DURN	1715.5	1719.7	3							IIIGG
			BOUL							1730.5	1730.8	1	III
			BOUL				1936.4	1937.0	1	1936.4	1937.0	1	III
	2124	2345	HARV				1936	1937	1	1936	1937	1	IIIG
			BOUL				2010.5	2014.9	2	2010.5	2014.9	2	IIIG
			HARV				2011	2016	3	2011	2016	3	IIIGG,V
			SGMR							2013.3	2014.0	1	V
	2039	2400	CULG				2039	2400					IIIN,W
			CULG				2039	2400	1				IN
			SGMR							2114.0	2114.3	1	III
			BOUL				2114.0	2114.5	1	2114.0	2114.5	1	III
			HARV				2114		2	2114		2	IIIG
			CULG				2114		2	2114		1	IIIB
			BOUL							2123.6	2123.9	1	III
			BOUL							2127.5	2127.9	1	III
			CULG				2127.5	2128	2				IIIB
	2159	2400	MANI										
			BOUL							2236	2350	1	CONT
			CULG				2244	2245	2				IIIG
			HARV				2245		2				IIIB
			HARV				2248	2250	1				IIIG
			BOUL				2300	2345	1				IS
			BOUL				2317.5	2318.9	2	2317.5	2318.9	2	IIIG
			HARV				2318	2319	2	2318	2319	1	IIIG
			CULG				2318	2319	2	2318	2319	1	IIIG
			BOUL				2325.5	2328.4	2	2325.5	2328.4	2	IIIG
			CULG	2325	2328	1	2325	2328	1	2325	2328	1	IIIG
			HARV				2326	2330	1	2330		1	IIIG
			BOUL				2345	2400	1	2345	2400	1	CONT
26	0000	0130	BOUL							0000	0100	1	CONT
			CULG				0000	0740	1				IS
	0000	0740	CULG				0000	0740					IIIN,W
			BOUL				0043.8	0044.0	1	0043.8	0044.0	1	III
			CULG				0043	0044	2				IIIG
			CULG				0221	0222	1				IIIG
			CULG				0247.5	0248	1	0247.5	0248	1	IIIG
			CULG				0302	0317	2	0392	0317	2	IIIGG
	0000	1007	MANI							0414.0	0414.4	2	III
			CULG	0414	0415	1	0414	0415	2	0414	0415	2	IIIG,U
			CULG				0439	0442.5	1				IIIG
	0540	1730	DURN	0540 E	1730 D	3	0540 E	1730 D	3				IC,N,DC
	0549	0718	WEIS				0558.0	0716.0	2				IDCN
			CULG				0606	0607	1				IIIG,U
			MANI							0648.4	0648.6	1	III
			CULG				0648	0649	1				IIIG,U
			CULG				0708	0736	2				IIIGG
	0735	1707	WEIS				0735.1	0735.4	1				IIIB
			WEIS				0747.5	0748.1	2				IIIG
	0821	1358	DWIN				0821	1358	1				IS
			DWIN				0838.5	0838.8	2				IIIG
			DWIN				0853.6	0855.2	2				IIIG
			DWIN				0929.5	0930.0	1				IIIG
			WEIS				0929.5	0929.6	1				IIIB
			WEIS				0933.2	0933.9	2				IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS
MARCH 1976

MAR 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
26			DURN	0933.2	0933.3	3	0933.2	0933.3	3				IIIG
			DWIN				0933.2	0934.0	3				IIIG
			DWIN				1005.1		1				IIIB
			DWIN				1008.7		1				IIIB
			WEIS				1008.7	1008.8	1				IIIB
			DWIN				1035.7	1041.2	3				IIIGG
			WEIS				1035.8	1036	2				IIIG
			WEIS				1038.2	1038.7	1				IIIG
			DURN	1038.5	1039.7	3	1038.5	1039.0	3				IIIG
			WEIS				1040.3	1041.9	1				IIIGG
			WEIS				1046.6	1047.7	2				IIIGG
			DWIN				1046.6	1047.5	2				IIIG
			DWIN				1057.4	1057.6	2				IIIG
			DWIN				1109.7	1110	1				IIIG
			DWIN				1113.0	1113.3	2				IIIG
			WEIS				1113.0	1113.7	2				IIIG
			DURN	1146.4	1146.5	3	1146.4	1146.5	3				III
			DWIN				1146.4	1146.7	2				IIIG
			WEIS				1146.5	1146.8	2				IIIG
			WEIS				1220.0	1646.0	2				I
			WEIS				1237.5	1237.7	2				IIIB
			DURN	1241.1	1241.3	3	1241.1	1241.3	3				IIIG
			DWIN				1241.1	1241.3	3				IIIG
			WEIS				1241.3	1241.5	2				IIIG
			DWIN				1243.1	1243.6	2				IIIG
			WEIS				1243.3	1243.6	1				IIIG
			WEIS				1305.7	1305.8	1				IIIB
	1300	2400	BOUL				1313	1447	1				IS
			DWIN				1319.5	1320.5	2				IIIG
			BOUL				1319.6	1320.7	1				IIIG
	1316	2345	HARV				1319	1321	1				IIIG
			WEIS				1320.4	1320.5	1				IIIB
			HARV				1323	1620	1				IN
			WEIS				1329.0	1329.5	3				IIIG
			BOUL				1329.0	1330.4	1	1329.0	1330.4	1	IIIG
	1040	2259	SGMR							1329.4	1329.8	2	V
			HARV				1329	1330	2				IIIG
			WEIS				1340.7	1341.9	3				IIIG
			DWIN				1340.7	1342.0	3				IIIG
			DURN	1341.2	1341.9	3	1341.2	1341.9	3				IIIG
			BOUL				1341.2	1342.0	1				IIIG
			SGMR							1341.5	1350.5	1	CONT
			SGMR							1341.5	1442.3	2	IIIG
			HARV				1341	1342	3				IIIGG
			WEIS				1343.1	1343.2	1				IIIG
			BOUL				1345.5	1345.9	1	1345.5	1349.9	1	III
			BOUL				1352.4	1352.6	1				IIIG
			WEIS				1352.5	1352.7	3				IIIG
			DWIN				1352.5	1353.0	2				IIIG
			HARV				1352	1353	2				IIIG
			BOUL				1407.5	1408.6	1				IIIG
			WEIS				1407.6	1408.5	2				IIIG
			HARV				1407	1409	1				IIIG
			BOUL				1437.2	1447.3	2	1437.2	1447.3	2	IIIGG
			WEIS				1437.3	1445.3	2				IIIGG
			HARV				1438	1440	2	1438	1440	2	IIIG
			DURN	1441.6	1444.6	3	1441.6	1444.6	3				IIIGG
			SGMR							1442.8	1450.6	2	IV
			HARV				1443	1445	3	1443	1445	3	IIIGG,V
			BOUL							1447.3	1551.5	2	V
			BOUL				1453.2	1520	2	1453.2	1520	2	CONT
			SGMR							1500.0	2259.0	1	I
			WEIS				1518.0	1520.3	3				IIIGG
			HARV				1518	1520	3	1518	1520	2	IIIGG
			BOUL				1520	1720					IS
			BOUL							1520	1730	1	CONT
			HARV				1620	1855	1				I
			BOUL				1717.6	1718.8	2	1717.6	1718.8	2	IIIG
			HARV				1717	1719	3	1717	1719	3	IIIG,V
			BOUL				1720	2140	3	1720	2140	3	IV

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS
MARCH 1976

MAR 1976	TIMES OF OBSERVATION START UT	TIMES OF OBSERVATION END UT	STATION	EVENTS DECIMETRIC BAND START UT	DECIMETRIC BAND END UT	DECIMETRIC BAND INT	METRIC BAND START UT	METRIC BAND END UT	METRIC BAND INT	DEKAMETRIC BAND START UT	DEKAMETRIC BAND END UT	DEKAMETRIC BAND INT	SPECTRAL TYPE
26			HARV							1750	2036	1	I
			HARV				1800	1802	2	1800	1802	2	IIIG
			HARV				1809	2152	2	1809	2152	2	IIIN
			HARV				1836		3	1836		3	IIIB,V
			HARV				1856	2114	2				I
	2039	2400	CULG	2039	2400	1	2039	2400	2				IS
			CULG				2039	2400	1				IIIS
			HARV				2114	2345	1				I
			BOUL				2140	2400	1	2140	2400	1	CONT
	2159	2400	MANI										
27	0000	1007	MANI										
	0000	0056	CULG	0000	0056	1	0000	0056	1				IS
			CULG				0000	0056	1				IIIS
			CULG	0000	0056	1							IIIN
	0000	0130	BOUL				0000	0101	1	0000	0101	1	CONT
			CULG				0320	0738	1				IIIS
	0320	0738	CULG				0320	0738	1				IS
	0538	1730	DURN	0538 E	1730 D	3	0538 E	1730 D	3				IC,N,DC
	0534	1644	WEIS				0548.0	1625	2				I
			WEIS				0640.3	0640.8	1				IIIG
			WEIS				0703.7	0704.3	2				IIIG
			CULG				0703	0710	2				IIIG
			WEIS				0707.5	0709.4	2				IIIGG
			WEIS				0725.9	0727.3	3				IIIGG
			CULG				0725	0727	2				IIIG
			WEIS				0859.7	0859.9	1				IIIG
			WEIS				1025.5	1025.6	1				IIIB
			WEIS				1031.0	1032.2	3				IIIGG
			DURN	1031.1	1031.4	3	1031.1	1031.4	3				IIIG
	1038	2300	SGMR							1040.1	1203.5	1	I
			WEIS				1044.8	1045.0	2				IIIG
			WEIS				1047.5	1047.6	2				IIIB
			WEIS				1055.4	1056.1	2				IIIG
			WEIS				1057.4	1057.5	2				IIIB
			WEIS				1109.5	1109.8	1				IIIG
			WEIS				1123.6	1124.6	1				IIIG
			WEIS				1130.2	1132.5	1				IIIG
			WEIS				1158.8	1210.2	3				IIIG,V,RS
			DURN	1203.2	1208.5	3	1203.2	1208.5	3				IIIGG
			SGMR							1203.5	1205.9	3	IV
			SGMR							1205.9	1310.0	1	CONT
			WEIS				1213.0	1214.5	2				IIIGG
			WEIS				1217.6	1218.6	2				IIIG
			WEIS				1221.3	1223.0	2				IIIG
			WEIS				1257.9	1258.6	2				IIIGG
	1300	2400	BOUL				1305	1340	1				IS
	1315	2350	HARV				1317	2350	1				I
			BOUL				1340	2400	2				IS
			BOUL				1340	2400	1	1340	2400	1	CONT
			DURN	1438.6	1438.8	3	1438.6	1438.8	2				IIIG
			WEIS				1438.7	1441.0	2				IIIGG
			HARV				1438	1441	2				IIIGG
			SGMR							1440.3	1441.2	1	IIIG
			HARV				1444	1445	2				IIIG
			WEIS				1445.6	1445.8	1				IIIG
			WEIS				1448.5	1448.6	1				IIIB
			HARV				1642	2033	2	1642	2033	2	IIIN
			HARV				2036	2038	1				IIIG
			CULG				2038	2400	1				IIIS
	2038	2400	CULG				2038	2400	1				IS
			CULG	2038	2400	1				2038	2400	1	IIIN
			HARV				2153	2154	1	2153	2154	1	IIIB
			HARV				2253	2254	2	2253	2254	2	IIIG
			CULG	2253	2254	1	2253	2254	2				IIIG
			CULG	2327	2329	2	2327	2329	2				IIIGG
			HARV	2327	2328	2	2327	2328	2				IIIG
	2159	2400	MANI							2340.5	2341.0	1	III
			CULG	2340	2342	1	2340.5	2342	2	2340.5	2343	2	IIIG,V
			HARV				2340	2341	3				IIIGG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS
MARCH 1976

MAR 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
28			BOUL				0000	0105	1				IS
	0000	0130	BOUL							0000	0105	1	CONT
			CULG							0000	0737	1	IIIN
			CULG				0000	0737	1				IIIS
	0000	0737	CULG				0000	0737	1				IS
			CULG				0037	0038	2				IIIB
			CULG	0137	0138	1	0137	0138	2				IIIG
			CULG				0523.5	0524.5	2				IIIG,U
	0000	1009	MANI							0534.7	0535.3	1	III
			CULG				0534	0535	2				IIIG,U
	0536	1424	DURN	0536 E	1424 D	3	0536 E	1424 D	3				IC,N,DC
			CULG				0546	0547	1	0546	0547	1	IIIG
			DURN	0553.3	0558.1	2	0555.2	0558.1	1				IIIGG,RS
			CULG				0555	0557	2				IIIG
			CULG				0557	0608	1				II
			DURN	0601.2	0603.3	1	0601.2	0603.3	1				IIIG
			DURN	0606.6	0609.6	2	0606.6	0608.6	2				IIIG
			CULG				0607	0609	2				IIIG
			DURN	0741.6	0743.1	2	0741.6	0743.2	3				IIIG
			DURN	0745.4	0748.2	2	0745.4	0748.2	3				IIIG
			DURN	0830.5	0830.7	2	0830.5	0830.7	3				IIIG
			DURN	0832.2	0833.2	3	0832.2	0833.2	3				IIIG
			DURN	0834.5	0834.7	1	0834.5	0834.7	2				IIIG
			DURN	0938.1	0938.3	3	0938.1	0938.3	3				IIIG
			DURN	0940.5	0940.8	3							IIIG
			DURN	0940	1300	3	0940	1300	3				IV
	1036	2301	SGMR							1036.2	1335.0	2	CONT
	1300	2400	BOUL				1306.6	1408.0	2				IV
	1315	2346	HARV				1315	1925	1				I
			SGMR							1335.0	1703.0	1	I
			SGMR							1340.5	1344.2	2	IIIG
			HARV				1340	1344	2				IIIGG
			DURN	1342.7	1343.1	3	1342.7	1343.1	3				UNCLF
			SGMR							1401.6	1413.8	3	IIIG
			HARV				1407	1408	3	1407	1408	2	IIIG
			BOUL				1408.0	1923.0	3	1408.0	1923.0	3	IV
	1432	1739	DURN	1432 E	1739 D	3	1432 E	1739 D	3				IC,N
			DURN	1538.7	1538.8	2							III
			HARV				1614	1615	1	1614	1615	1	IIIG
			HARV							1649	1915	1	I
			HARV				1728	1915	1	1728	1915	1	IIIS
			DURN	1737.4	1737.8	3	1737.4	1737.8	3				IIIG
			HARV	1737	1738	2	1737	1738	2				IIIG
			HARV	1836	1837	2	1836	1837	1				IIIG
			HARV	1842	1843	1							IIIG
			HARV	1917	2055	2							IVN
			HARV				1919	1925	3	1919	1925	3	IIIGG
			HARV				1921	1950	3	1925	1948	3	II
			SGMR							1922.9	1925.1	1	IIIG
			BOUL				1923.0	1931.6	3	1923.0	1931.6	3	IIIGG
			SGMR							1925.2	1939.3	3	IV
			HARV				1925	2346	2	1939	2346	2	I
			BOUL				1931.6	2400	3	1931.6	2400	3	IV
			HARV	1938	1941	2							IVP
			SGMR							1939.3	2301.0	2	CONT
			HARV				2011	2248	2	2011	2248	2	IIIN
	2038	2400	CULG				2038	2400	2				IS
			CULG				2038	2400	1				IIIS
			SGMR							2136.5	2137.1	2	V
			BOUL				2136.5	2137.7	3	2136.5	2137.7	3	III
			HARV				2136	2137	2	2136	2137	2	IIIG
			CULG				2136	2137	2				IIIG
	2158	2400	MANI										
29			CULG				0000	0737	2				IIIS
	0000	0737	CULG				0000	0737	2				IS
			CULG							0000	0530	1	IIIN
	0000	0130	BOUL				0000	0112	3	0000	0112	3	IV
	0000	1009	MANI							0301.6	0305.2	3	IIIG
			CULG				0301	0306	2	0301	0306	2	IIIGG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS
MARCH 1976

MAR 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
29			MANI							0336.7	0337.2	2	III
			CULG				0336	0338	2	0336	0338	2	IIIG
			MANI							0341.2	0341.5	3	III
			CULG	0341	0342	1	0341	0342	2	0341	0342	1	IIIG
			MANI							0420.1	0420.7	1	III
			MANI							0429.8	0430.4	2	III
			MANI							0505.7	0510.6	2	IIIG
			CULG	0505	0511	1	0505	0511	2	0505	0511	1	IIIG
			MANI							0523.1	0524.1	3	III
			CULG	0523	0525	1	0523	0525	2	0523	0525	2	IIIG,V
	0535	1739	DURN	0535 E	1739 D	3	0535 E	1739 D	3				IC,N,DC
			CULG				0550	0739	1				IIIS
			MANI							0559.0	0600.4	2	IIIG
			DURN	0559.9	0601.0	1	0559.9	0601.0	2				IIIG
			MANI							0614.4	0614.6	3	III
			DURN				0631.2	0631.3	2				IIIG
	0653	1710	WEIS				0657.0	1550.0	1				IIIS
			DURN	0720.6	0720.8	1	0720.6	0720.8	2				IIIG
			WEIS				0720.7	0721.0	3				IIIG
			MANI							0720.8	0721.2	3	III
			DURN	0725.0	0726.0	1	0725.0	0726.0	1				IIIG
			MANI							0817.9	0818.2	3	III
			DURN	0908.8	0909.9	3							IIIG
	1001	1440	DWIN				1001	1440	1				IS
			DWIN				1036	1050	2				IIIGG
			DURN	1042.6	1043.7	3	1042.6	1043.7	2				IIIG
			DURN				1046.0	1048.8	3				IIIGG
	1035	2302	SGMR							1046.1	1048.2	2	V
			SGMR							1053.8	1054.2	1	III
			DWIN				1056.2	1105	2				IIIGG
			DURN	1057.5	1058.0	1	1057.5	1058.0	1				IIIG
			DURN	1100.4	1100.6	2	1100.4	1100.6	2				IIIG
			SGMR							1135.0	1149.0	1	CONT
			SGMR							1149.0	2302.0	2	I
			DURN	1149.3	1149.4	3	1149.3	1149.4	1				IIIG
			DWIN				1151.2	1151.7	2				IIIG
			DURN	1151.4	1151.5	3	1151.5	1151.5	1				IIIG
			DWIN				1219.0	1223.0	2				IIIG
			DURN				1221.3	1221.3	1				III
			DURN	1222.5	1222.8	3	1222.5	1222.8	1				IIIG
			SGMR							1222.6	1228.1	1	IIIG
			DWIN				1227.6	1227.7	2				IIIG
			DURN				1227.7	1227.7	1				III
	1230	2400	BOUL				1304.6	2400	2	1304.6	2400	2	CONT
	1316	2345	HARV				1316	1731	1				IN
			DWIN				1318.6	1319.0	2				IIIG
			SGMR							1318.7	1319.2	2	III
			HARV				1318	1319	2	1318	1319	1	IIIG
			DURN	1453.7	1453.9	2	1453.7	1453.9	1				IIIG
			DURN	1455.7	1455.9	1	1455.7	1455.9	3				IIIG
			DURN	1506.2	1506.3	2							III
			HARV				1532	1723	1	1532	1723	1	IIIN
			WEIS				1617.0	1618.3	3				IIIG
			SGMR							1617.0	1628.8	2	IIIG
			HARV				1617	1618	3	1617	1618	3	IIIGG
			WEIS				1621.9	1627.7	3				IIIG
			DURN	1622.6	1623.5	3	1622.6	1623.5	3				IIIG
			HARV				1622	1625	3	1622	1625	3	IIIGG,U
			HARV				1713	1715	1	1713	1715	1	IIIG
			HARV				1723	2100	2	1723	2100	2	IIIS
			DURN	1724.0	1724.5	3	1724.0	1724.3	3				IIIG
			SGMR							1726.4	1736.2	2	IIIG
			DURN	1731.6	1732.3	2	1731.6	1732.3	2				IIIG
			HARV				1732	2341	2	1742	2341	1	I
			DURN	1733.6	1734.7	2							IIIG
			DURN	1737.8	1739.0	2	1737.8	1739.0	2				IIIG
			HARV				1750	1804	3	1750	1804	3	IIIGG,V
			HARV				1831	1833	2	1831	1833	2	UNCLF
	2037	2400	CULG	2037	2400	1	2037	2400	1				IS,RS,DP
			CULG				2037	2300	1	2037	2400	1	IIIN

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS
MARCH 1976

MAR 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
29			HARV				2103	2345	1	2103	2242	1	IIIN
			HARV				2107	2109	2	2107	2109	2	IIIG
			HARV				2139	2150	2	2139	2150	2	IIIGG
			CULG				2300	2400	2				IIIS
			HARV				2302	2307	3	2303	2307	2	IIIGG
	2155	2400	MANI							2320.1	2321.2	1	IIIG
			HARV				2320	2321	2	2320	2321	2	IIIG
			HARV				2325	2326	2				IIIG
			MANI							2348.8	2350.8	3	IIIG
30			CULG				0000	0737	2				IIIS
	0000	0737	CULG	0000	0737	1	0000	0737	1				IS,RS,DP
			CULG							0000	0737	1	IIIN
	0000	0130	BOUL				0000	0105	2	0000	0105	2	CONT
			CULG				0118.5	0119.5	2	0118.5	0119.5	2	IIIG
	0000	1009	MANI							0118.9	0119.4	2	III
			MANI							0210.3	0215.8	2	IIIG
			CULG				0210	0211	1	0210	0211	1	IIIG
			MANI							0329.1	0353.4	3	IIIG
			CULG				0340	0737	1				IIIS
			CULG							0340	0737	1	IIIN
			MANI							0359.2	0359.4	3	III
			MANI							0512.6	0512.9	3	III
			MANI							0516.9	0517.4	1	III
	0533	1739	DURN	0533 D	1739 E	3	0533 D	1739 E	3				IC,N,DC
			MANI							0603.0	0615.8	2	IIIG
			MANI							0647.8	0648.2	1	III
	0658	0941	WEIS				0710.0	0939.0	1				IIIS
	1006	1431	DWIN				1006	1431	1				IS
			DURN	1020.6	1020.7	3							IIIG
	1033	2303	SGMR							1148.0	2303.0	1	I
			DWIN				1213.8		1				IIIB
			SGMR							1216.5	1218.0	1	IIIG
			DWIN				1216.6	1220.6	1				IIIG
	1230	2400	BOUL				1255	2332	2	1255	2332	2	CONT
	1315	2345	HARV				1315	2309	1				IN
			HARV				1421	1736	1	1444	1736	1	IIIN,DP
			HARV				1536	1537	1	1536	1537	1	IIIG
			HARV				1701	1706	2	1701	1706	2	IIIGG
			BOUL				1703.0	2332	3	1703.0	2332	3	IIIN
			DURN	1703.5	1706.3	3	1703.5	1706.3	3				IIIGG
			SGMR							1704.7	1705.5	2	IIIG
			SGMR							1732.2	1734.2	2	IIIG
			HARV				1732	1734	3	1732	1734	3	IIIGG
			HARV				1738	2118	1	1738	2118	1	IIIS
			SGMR							1815.2	1822.9	2	IIIG
			HARV				1815	1823	3	1815	1823	3	IIIGG,V
			SGMR							1829.9	1832.8	2	IIIG
			HARV				1830	1834	3	1830	1834	3	IIIGG,V
	2037	2400	CULG				2037	2400	1				IS,RS,DP
			CULG				2037	2400	2				IIIS
			CULG	2037	2400	1				2037	2400	1	IIIN
			SGMR							2103.9	2104.7	2	V
			CULG				2103	2107	2	2103	2107	2	IIIGG
			HARV				2103	2107	3	2103	2107	3	IIIGG,V
			SGMR							2105.7	2106.5	2	V
			HARV				2130	2229	1	2130	2229	1	IIIN
	2154	2400	MANI										
31	0000	0736	CULG				0000	0736	1				IS,RS,DP
			CULG	0000	0736	1							IIIN
			CULG				0000	0736	1	0000	0736	1	IIIS
	0000	1009	MANI							0153.8	0201.9	3	IIIG
			CULG	0154	0202	2	0154	0202	2	0154	0202	2	IIIGG,V
	0531	1740	DURN	0531 E	1740 D	3	0531 E	1740 D	3				IC,N,DC
			MANI							0625.3	0626.0	1	III
			MANI							0701.5	0703.0	1	IIIG
			CULG	0701	0704	2	0701	0704	2	0701	0704	2	IIIG,V,U
			DURN	0703.1	0703.9	2	0703.1	0703.9	2				IIIG
	0853	1419	DWIN				0853	1419	1				IS

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS
MARCH 1976

MAR 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
31			DWIN				0921.0	0921.5	2				IIIG
			DURN	1001.7	1001.8	3	1001.7	1001.8	3				IIIG
			DWIN				1001.9						IIIB
	1031	2304	SGMR							1031.1	2304.0	2	I
			DWIN				1050.7	1053.9	2				IIIGG
			DURN	1052.0	1055.3	3	1052.0	1055.3	3				IIIGG
			DURN	1136.2	1136.3	3							III
			DURN	1140.4	1141.5	3	1140.7	1141.5	3				IIIG
			DWIN				1141.0	1141.7	2				IIIG
			DURN	1152.3	1152.3	3	1152.3	1152.3	3				III
			DURN	1153.2	1153.3	3	1153.2	1153.3	2				IIIG
			DURN	1153.8	1512	3	1153.8	1512	3				IV
			SGMR							1225.0	1348.0	3	IV
			DWIN				1300.4	1300.5	2				IIIG
			DWIN				1303.8	1304.3	2				IIIG
	1316	2345	HARV				1316	1440	1				I
			DWIN				1323.6	1324.1	2				IIIG
			DURN	1323.9	1324.3	3							IIIG
			DWIN				1352.4	1352.6	1				IV
			HARV				1434	1621	2	1434	1621	2	IIIN
			SGMR							1436.2	1438.2	2	V
			HARV	1436	1437	2	1436	1439	3	1436	1438	2	IIIGG,V
			DURN	1437.2	1437.2	2							III
			SGMR							1445.0	1449.2	2	IIIG
			DURN	1445.1	1445.4	3							IIIG
			HARV				1445	1449	2	1445	1449	2	IIIGG
			HARV				1541	1542	1	1541	1542	1	IIIG
			HARV				1546	1747	1				IN
			HARV				1608	1610	2	1609	1610	2	IIIG
			HARV				1624	1644	2	1624	1644	2	IIIS,DP
			HARV				1659	1704	2	1659	1704	2	IIIG,DP
			HARV				1707	1713	1	1707	1713	1	IIIGG
			HARV				1718	1756	2	1718	1756	2	IIIN,DP
			HARV				1747	1827	1				I
			HARV				1756	1936	3	1756	1936	3	IIIS
			SGMR							1804.8	1836.2	3	I
			HARV				1827	1912	3	1828	1912	3	I
	1905	2400	BOUL				1905	2400	2	1905	2400	2	CONT
			HARV				1912	2127	1	1912	2127	1	I
			HARV				1936	2100	2	1936	2100	2	IIIS
			CULG				2036	2240	1	2036	2240	1	IIIS
	2036	2240	CULG				2036	2240	2				IS
			HARV				2100	2127	1	2100	2127	1	IIIN
			CULG	2127.5	2129	1	2127.5	2129	2	2128	2129	2	IIIG,V
			SGMR							2127.7	2128.9	3	IIIG
			HARV				2127	2130	3	2127	2130	3	IIIGG,V
			HARV				2127	2337	1				IN
			HARV				2133	2134	1	2133	2134	1	IIIG
			CULG				2133	2135	2				IIIG
	2154	2400	MANI										
			CULG				2250	2400	1				IIIS
	2250	2400	CULG	2250	2400	1	2250	2400	1				IS,RS,DP

The symbols used in connection with the spectral type in describing the important bursts are as follows:

B = Single burst
G = Small group (< 10) of bursts
GG = Large group (> 10) of bursts
C = Underlying continuum (particularly with type I)
S = Storm in the sense of intermittent but apparently connected activity
N = Intermittent activity in this period
U = U-shaped burst of Type III
RS = Reverse slope burst
DP = Drifting pairs
DC = Drifting Chains
H = Herringbone
W = Weak
P = Pulsations
CONT = Continuum
UNCLF = Unclassified activity

SELECTED SOLAR EVENTS

MARCH 1976

Culgoora

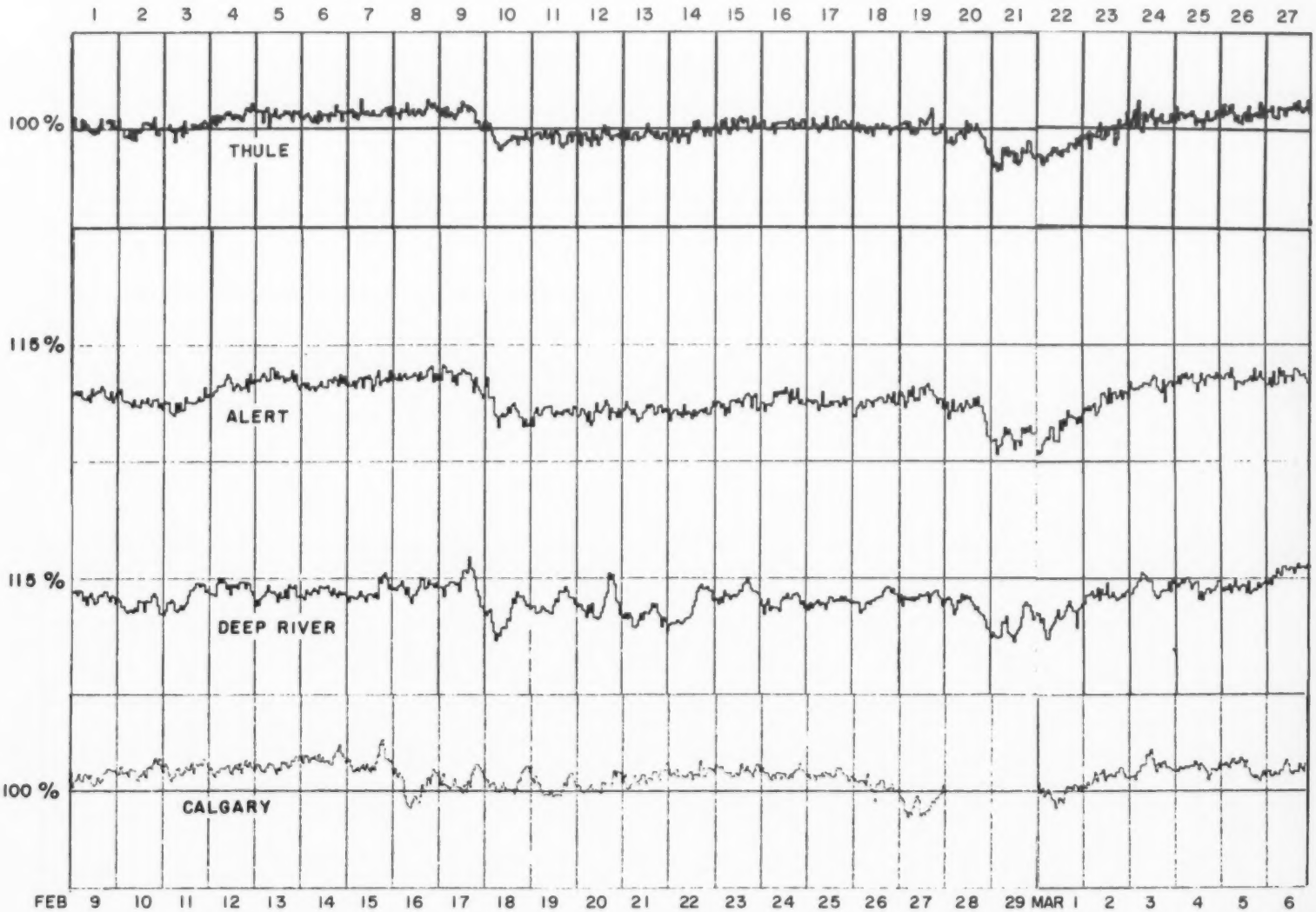
UT Date 1976 March	HELIOGRAPH EVENT							Spectral Type	REMARKS
	Start (UT)	End (UT)	Freq. (MHz)	Positions		Polarization	Intensity (1-3)		
				Central Dist. ($R_\odot$)	Position Angle (Deg.)				
16	2300	0520	160	0.9	70	L	†	I	Type I emission from this region continued until March 24.
20	0205	0230	160	1.1	80	O)			
			80	1.3	80	O)		II	
			43.25	1.6	70	-)			
	2259	2312	80	1.2	70	O)		II	
			43.25	1.4	40	-)			
22	0118	0120	160	1.2	250	O)		IIIG	*
			80	1.3	250	O)			
24	0355	0357	160	1.1	260	O)		IIIG	*
			80	1.2	280	O)			
25	0038	0040	160	1.1	50	O)			
			80	1.3	50	O)		IIIG,V	
			43.25	1.5	50	-)			
	0127	0130	160	1.0	230	O)			
			80	1.0	230	O)		IIIG	*
			43.25	1.3	250	-)			
26	0248	0249	160	1.1	100	O)			
			80	1.2	90	O)		IIIG	*
			43.25	1.4	70	-)			
	2300	0520	160	1.1	100	r		I	Type I from this region still continuing until March 31
28	0036	0038	80	0.8	70	O)	†	IIIG	*
			43.25	1.0	70	-)			
29	0336	0337	80	0.5	90	O)		IIIG	*
			43.25	0.5	90	-)			
30	0210	0212	80	0.3	90	C		IIIG	* Positions at other frequencies not recorded
31	0154	0202	80	0.3	0	O)		IIIG	*
			43.25	0.6	0	-)			

Days without Heliograph observations: Nil

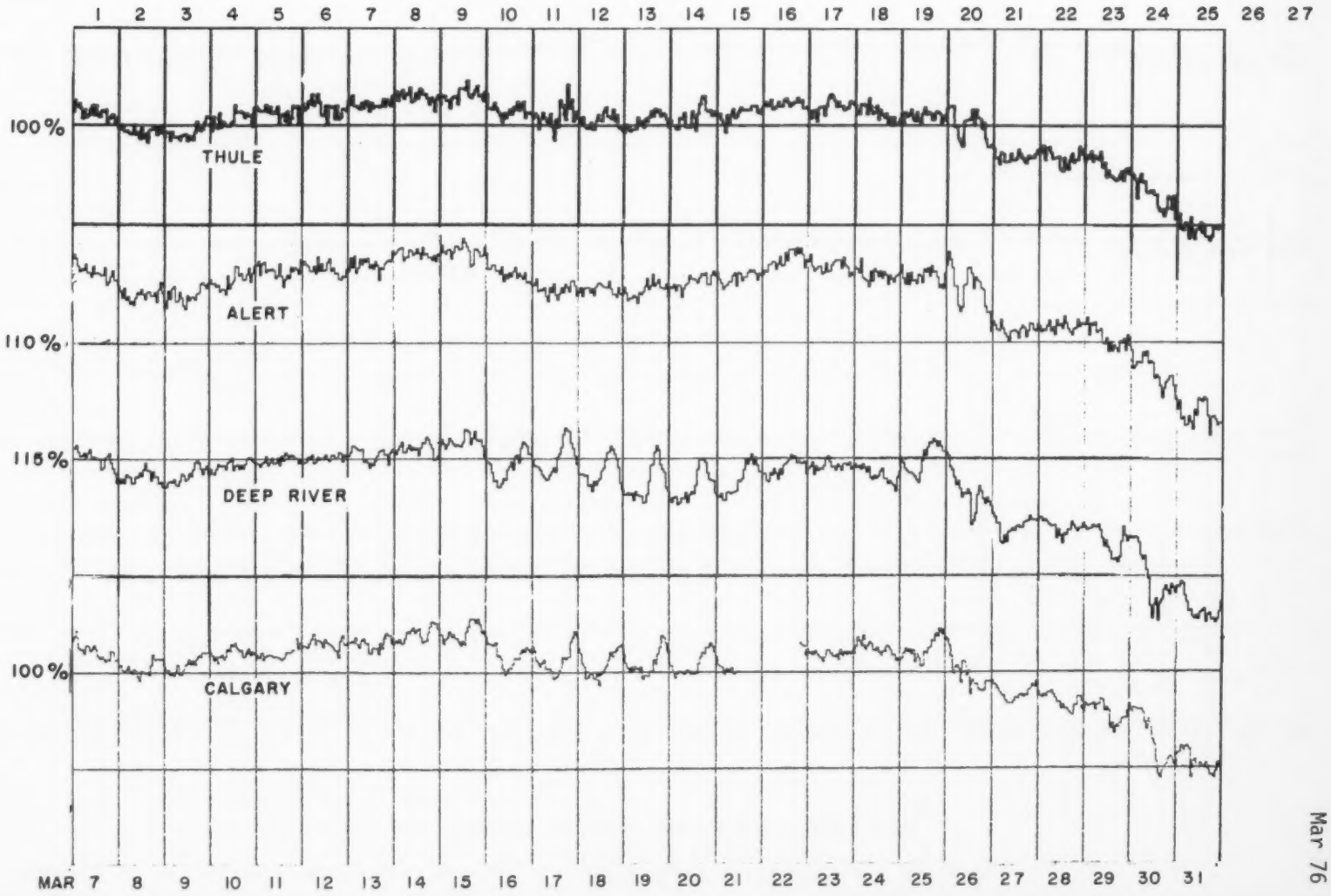
* Other type III's observed at same position during the day.

† Because of equipment modifications which are in progress, intensity classifications are not available for this month. An indication of intensities can be obtained from the corresponding entries in "Solar Radio Emission - Spectral Observations".

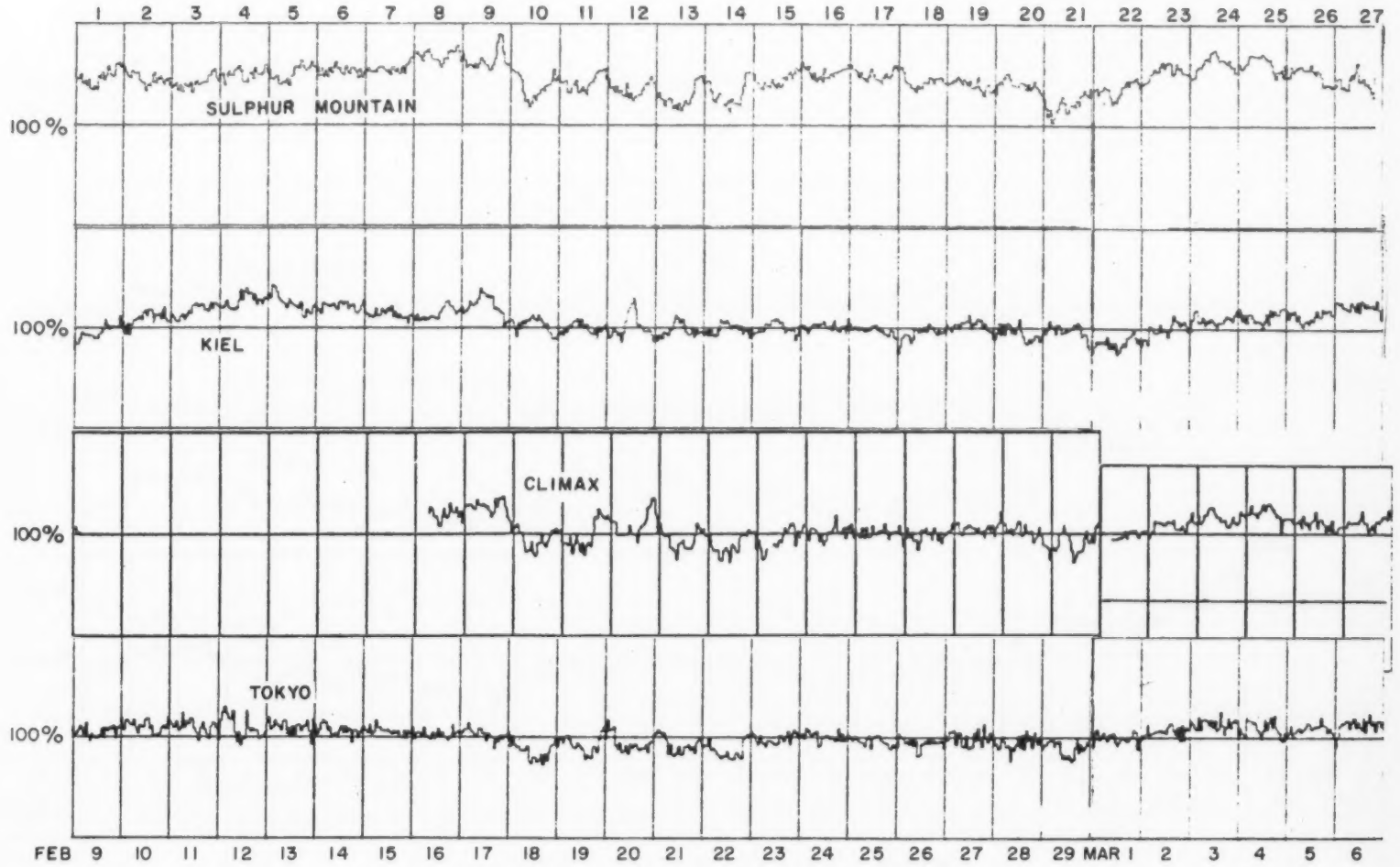
COSMIC RAY INDICES
(Neutron Monitors)
Bartel's Rotation 1949 (FEB-MAR 1976)



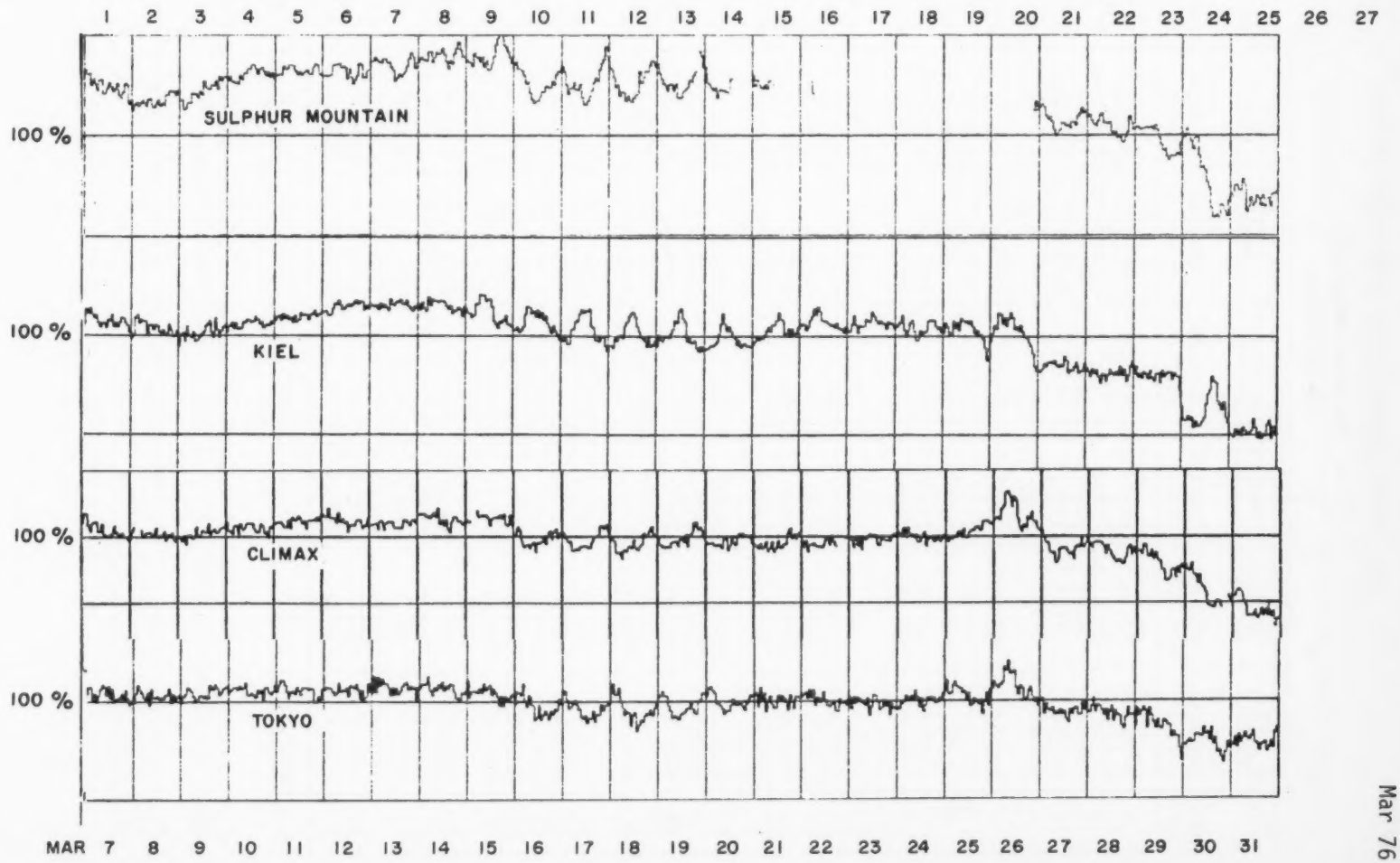
COSMIC RAY INDICES
(Neutron Monitors)
Bartel's Rotation 1950 (MARCH 1976)



COSMIC RAY INDICES
(Neutron Monitors)
Bartel's Rotation 1949 (FEB – MAR 1976)



COSMIC RAY INDICES
(Neutron Monitors)
Bartel's Rotation 1950 (MARCH 1976)



COSMIC RAY INDICES

(Neutron Monitors)

MARCH 1976

Mar. 1976	THULE Average cts/hr	ALERT Average cts/hr	DEEP RIVER Average cts/hr	CALGARY Average cts/hr	SULPHUR MT Average cts/hr	KIEL Average cts/hr	CLIMAX Average cts/hr	TOKYO Average cts/hr
1	4490.5	7434.6	6972.2	11697.2	8942.6	6267.3	4234.4	3557.5
2	4535.8	7518.7	7031.1	11795.0	9021.0	6309.7	4265.4	3569.5
3	4567.5	7561.4	7054.3	11855.8	9054.8	6341.0	4288.6	3583.1
4	4574.8	7581.3	7054.5	11847.3	9056.6	6353.5	4299.3	3575.2
5	4584.3	7583.2	7052.7	11845.9	9008.4	6354.5	4268.3	3573.6
6	4594.5	7585.3	7094.0	11842.7	8982.5	6386.8	4274.9	3580.7
7	4575.0	7550.9	7079.2	11841.2	8997.3	6359.5	4261.4	3570.4
8	4531.3	7483.6	7029.3	11738.0	8935.3	6336.5	4245.6	3568.6
9	4528.5	7482.3	7033.0	11759.8	8977.9	6322.9	4248.1	3574.5
10	4560.5	7524.8	7060.4	11829.1	9051.6	6349.7	4265.2	3578.3
11	4575.3	7550.2	7073.4	11822.2(23)	9066.5	6373.4	4286.2	3577.8
12	4585.8	7555.5	7078.5	11881.0	9061.9	6406.5	4289.4	3578.9
13	4594.2	7570.0	7086.6	11885.2	9092.2	6411.1	4279.2	3584.2
14	4612.8	7598.5	7103.6	11942.4	9132.4	6408.9	4294.0	3581.4
15	4615.6	7607.3	7122.0	11952.2	9133.3	6388.4	4295.2	3573.4
16	4581.5	7544.6	7060.1	11814.4	9011.6	6356.2	4230.5	3549.7
17	4568.0	7498.0	7075.8	11785.4	9017.2	6333.1	4227.5	3544.8
18	4556.0	7497.0	7043.3	11757.4	9014.1	6318.6	4216.0	3543.8
19	4557.6	7495.9	7012.6	11762.8	9020.6(23)	6316.5	4230.9	3549.9
20	4566.0	7519.3	7003.1	11754.7	8993.3(13)	6303.4	4223.3	3557.5
21	4574.1	7531.0	7020.3	11726.3(12)	9007.8(9)	6330.3	4218.0	3560.7
22	4595.4	7581.6	7052.8	11858.4(4)	8993.4(2)	6357.0	4216.4	3560.1
23	4590.0	7563.0	7057.8	11816.0	-- (0)	6353.4	4228.3	3553.8
24	4574.6	7538.7	7034.5	11847.7	-- (0)	6339.7	4238.5	3559.6
25	4568.8	7534.0	7077.2	11847.5	-- (0)	6329.4	4253.5	3568.4
26	4548.1	7504.3	6992.3	11698.9	8906.2(3)	6326.0	4306.1	3585.3
27	4472.8	7382.6	6899.4	11574.4	8850.2	6217.3	4201.0	3541.1
28	4473.2	7390.8	6896.3	11524.4	8821.0	6196.0	4190.5	3536.2
29	4448.9	7358.5	6864.1	11453.6	8763.8	6187.5	4153.5	3514.3
30	4386.1	7262.0	6761.2	11298.3	8599.6	6078.9	4068.2	3483.5
31	4308.0	7138.8	6683.8	11147.6	8514.2	6008.5	4007.6	3484.7
MEAN	4545.0	7500.9	7014.8	11748.5	8965.3	6313.6	4236.0	3558.7

( ) Number of hours for which data are available if less than 24. Number of Section Hours at Climax if sum of both sections is less than 40 hours.

Thule, Alert, Calgary, Sulphur Mountain, Kiel and Climax Scaling Factors = 100.
Deep River Scaling Factor = 300.
Tokyo Scaling Factor = 128.

GEOMAGNETIC ACTIVITY INDICES

MARCH 1976

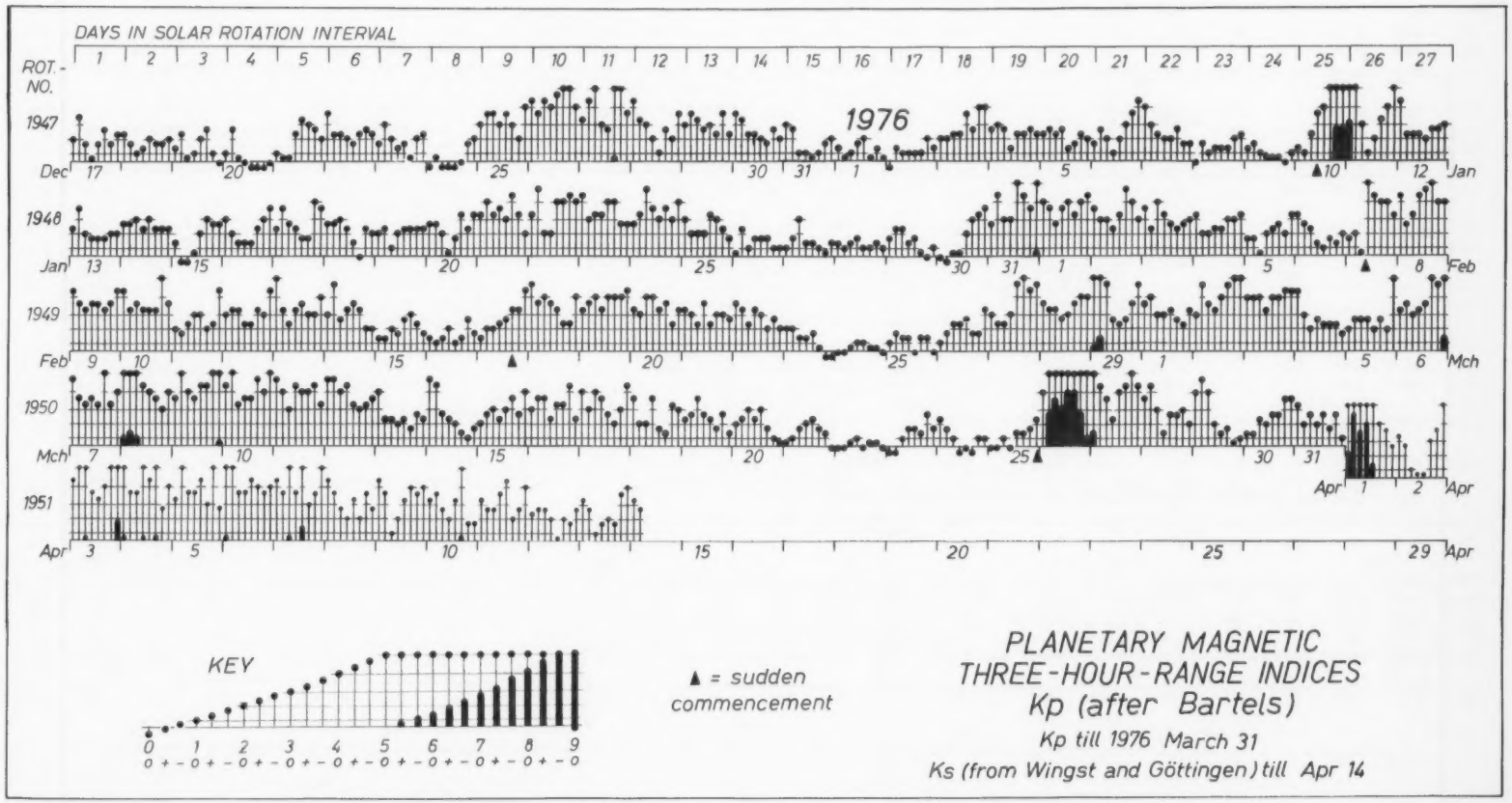
Day		Three-Hourly Indices Kp									Three-Hourly Indices Km								Ap	aa					Cp
		1	2	3	4	5	6	7	8	Sum	1	2	3	4	5	6	7	8		N	S	M			
1		4-	4	3	3	3+	3-	2+	3+	25+	3	3+	2+	3-	3+	3-	2+	3+	17	32	30	31	32		0.9
2		3	5-	4-	3+	4	5-	5	5	33+	2+	4-	3-	3-	4-	4+	4+	4+	32	54	45	29	70		1.3
3		4	4	4	3+	4	4	4+	4+	32	3+	3	3	3-	4-	4	4+	4	27	46	44	34	56		1.2
4		4+	3	2	3-	2+	2+	2+	2-	21-	4-	2+	2-	2+	2	2	2+	1+	12	22	17	25	14		0.7
5		2	3-	3-	3-	2	3-	2	5	22-	2	2	2	3-	2-	3-	2	4	15	29	25	19	35		0.8
6		3+	4-	3	3+	4-	5	5-	6	33-	3	3	3-	3	4-	4+	4	5	33	54	54	28	80		1.3
7		5-	4-	3+	4-	3+	5	3+	4	31	4+	3	3-	4-	3-	4	3	4-	26	44	46	39	51		1.2
8	D	6-	6	6-	4+	4	4-	3	4	36+	5-	4+	5-	4	5-	3+	3	4-	42	65	65	81	50		1.5
9	D	4-	5	4	4-	4+	4+	5	5+	35+	4-	4+	3+	3+	4+	4	4+	5	36	47	59	42	64		1.4
10	D	4+	5	3+	4-	4-	5-	4	5	34-	4-	4+	3-	3+	4-	4-	4-	5-	32	50	45	38	57		1.3
11		5-	4	3	4+	4	4	4+	3+	32-	4-	3+	2+	4-	4	3+	4-	3	27	41	40	35	46		1.2
12		5-	5-	4	4+	3+	3	3+	4-	31	4+	4-	3+	4+	3+	3-	3	4-	26	37	46	47	36		1.2
13	Q	4	2+	2+	2	2+	2-	3-	2+	20-	4-	2-	2+	2+	3-	2	3-	3-	11	18	20	19	20		0.6
14		5-	4+	3-	2+	2	1+	1	2-	20	4-	3+	2+	2+	2	2-	1+	2-	14	20	21	27	15		0.8
15		2	3-	3	2+	3	4-	3-	4	23+	2	3-	3	2	4-	3+	3-	4	15	27	33	18	42		0.8
16		3	4-	4-	2+	3+	3+	4+	2+	26	3-	3-	3	2+	3	3+	4-	2	18	34	32	26	40		1.0
17		4	3	4	4-	3-	2	3	4+	27-	3	3-	3+	4-	3	2+	3-	4	20	33	32	35	30		1.0
18		4-	2	2	4-	2-	1+	3+	3	21-	3	2-	2+	3+	2-	2-	3	3-	13	24	22	26	20		0.7
19	Q	2+	3-	4-	3-	2+	2-	3-	1+	19+	2	2+	3	3-	3-	2-	3-	1+	11	17	19	21	16		0.6
20	Q	2	2+	3	2+	3	2-	1	1-	16	2-	2	2+	3-	3-	2	1	1-	8	17	15	18	15		0.5
21	QQ	1-	1	2-	2	2+	2-	1+	0+	11	1	1	1+	2	3-	2-	1+	1-	5	12	12	10	14	KK	0.2
22	QQ	0+	0+	1-	1	0+	1-	1-	0+	4+	0+	0+	1	1	1-	1+	0+	1-	3	5	6	7	4	CC	0.0
23	QQ	0	0	1	2-	2-	1+	3-	2-	10	0+	0+	1	1+	2-	2	3-	2	5	13	10	6	17	KC	0.2
24	QQ	2+	2-	1	0	0+	0	1	1	7+	2	1+	1-	0	0+	0	1-	1	4	7	7	10	4	CC	0.1
25	QQ	0+	0+	1	0+	1+	1+	2-	2+	9-	0+	0+	1+	1-	1+	1+	2-	2+	4	10	7	6	12	C	0.2
26	D	4	7	8-	7+	8	8	7	6-	55-	3+	6-	7	7-	6+	7-	6	5-	138	114	181	132	164		1.9
27	D	6	4+	4-	2+	4	4+	5	4+	34	6-	4	3	2+	4+	4-	5-	4	35	43	56	41	58		1.4
28		4-	4+	3	1+	3-	3-	3	2	23-	3	4-	3-	1+	3-	3-	3-	2-	15	22	27	26	23		0.8
29		4	5-	4	2	1+	2-	1-	1	19+	4-	4-	4-	2+	1+	1+	1	1-	15	20	22	35	8		0.8
30	Q	1+	1+	2+	2	3-	3-	4-	4-	20-	1	1	2+	2	3	2+	4-	3	12	25	28	11	42		0.7
31	Q	3+	2	3-	2	3-	2-	3-	1	18	3	2-	3-	3-	3-	2-	2+	1	10	19	18	20	19		0.5
																		Mean	22	32.3	35.0	33.7			0.86

Day	Three-Hourly Indices Kn								Three-Hourly Indices Ks							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1	3-	3+	3-	3	3	3-	2	3	3+	3+	2	3-	4-	3-	2+	3+
2	2+	4-	3-	3-	4-	4+	5-	4+	2+	3+	3-	2+	4-	4	4+	5-
3	3+	3	3	3-	4-	4	4+	4-	4-	3+	3+	3-	4-	4+	4+	4+
4	4-	2	2-	3-	2+	2	2+	1	3+	2+	2-	2	2-	2	2	1+
5	2-	2	2+	3-	2-	2+	2	4+	2+	2	2	2+	2-	3-	2	4
6	3	3	3-	3	4-	4+	4	5-	3	3+	3-	3	4-	5-	4	5+
7	4+	3	3	4-	3	4+	3	3+	4+	3	2+	3+	3-	4	3+	4-
8	5-	5-	5-	4+	5-	3+	3+	4-	5-	4	4+	4	4+	3+	3	4-
9	4-	4	4-	3+	4+	4-	4+	5-	4	4+	3+	4-	4+	4+	5-	5
10	3+	4+	3-	3	4-	4-	3+	5-	4-	4+	3-	4-	4-	4	4-	5-
11	4-	4-	2+	4	4	3+	4-	3	4-	3+	2	4-	4-	4-	4-	3+
12	4+	4	3+	4	3+	3-	3	3+	4+	3+	3+	4+	4-	3	3	4-
13	3+	2-	2+	2	3-	2	2+	3-	4-	2-	2	2+	3	2+	3	3-
14	4	3+	2+	2+	2	2-	1+	1+	4-	3	2+	2	2+	2-	1	2
15	2	2+	3	2	4-	4-	3-	4	2	3	3-	2	4-	3	3-	4-
16	2+	3	3+	2	3-	3+	4-	2	3-	3-	3-	2+	4-	3+	4-	2+
17	3	3-	3+	3+	3-	2	3	4-	3+	3-	3+	4-	3	3-	2+	4+
18	3	1+	2	4-	2-	2-	3+	3-	3	2-	2+	3	2-	1+	3-	3-
19	2-	2+	3	3-	2+	2	3-	1+	2+	2+	3	2+	3-	2-	3	1+
20	2-	2	3-	3-	3-	2-	1+	1	2-	2	2+	2+	3-	2	1	1-
21	1-	1-	2-	2	3-	2-	1	0+	1+	1	1+	2	2+	2-	1+	1-
22	0	0+	1-	1	1-	1+	0+	1-	1	1-	1	1+	1-	1	0+	0+
23	0	0	1-	1+	2-	2-	3-	2-	0+	0+	1	1+	1+	2	3-	2+
24	2-	1	1-	0	1-	0	1-	1	2+	2-	1-	0	0+	0+	1-	1-
25	0+	0+	1+	1-	1+	1+	2-	2+	0+	1-	1+	1-	1	1	1+	2+
26	3+	6	7+	7-	6+	7	6	4+	3	5+	7-	6+	6+	7-	6+	5+
27	5+	4	3+	2	4+	4-	4+	4	6-	4-	3	2+	4	4-	5-	4
28	3	3+	2+	1+	3-	3-	3-	2-	3+	4-	3-	2-	3-	2+	2+	2-
29	3	4-	4-	2+	1+	2-	1+	1	4	4-	4-	2+	1+	1	1-	1-
30	1	1	2+	2	3-	2+	3+	3+	1+	1	2+	2	3+	2+	4-	3
31	3-	2-	3-	3	3-	2	3-	1+	3+	1+	3-	2	3-	1+	2+	1-

DAILY AVERAGE INDICES Ap

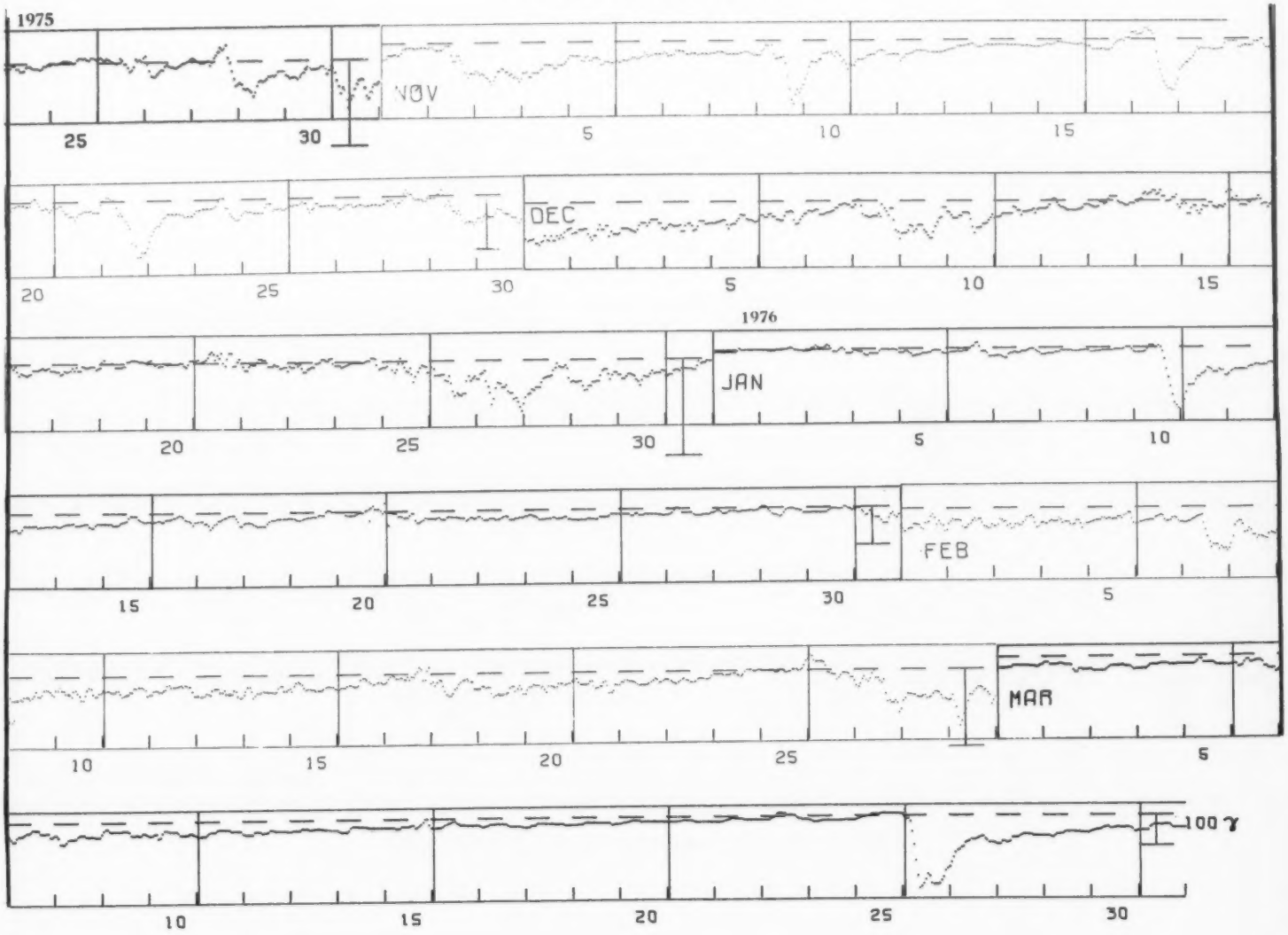
DAY	1975 APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1976 JAN	FEB	MAR
1	7	6	24	12	9	7	6	7	32	4	23	17
2	5	16	28	6	7	6	2	36	27	4	20	32
3	6	19	12	7	5	3	11	65	12	15	16	27
4	7	14	11	6	6	3	9	41	13	10	12	12
5	10	34	12	5	29	4	6	22	8	9	8	15
6	15	35	11	6	7	13	25	11	7	13	8	33
7	25	22	6	12	5	7	38	10	4	11	21	26
8	32	14	4	37	14	6	45	7	18	5	29	42
9	52	16	5	35	15	24	37	37	16	4	24	38
10	35	19	4	17	15	26	24	20	8	47	24	32
11	34	2	14	18	7	26	8	13	5	40	12	27
12	27	3	27	5	4	19	12	9	3	13	17	26
13	29	6	14	10	5	17	7	4	3	9	22	11
14	21	14	8	13	16	13	9	3	6	11	17	14
15	7	3	13	15	18	8	5	4	9	7	8	15
16	6	28	17	12	5	6	10	6	14	10	6	18
17	5	14	12	14	9	13	8	17	9	14	14	20
18	6	7	12	15	6	14	4	7	6	9	22	13
19	5	15	12	9	4	8	3	8	6	8	25	11
20	25	23	6	6	15	7	5	9	3	11	19	8
21	23	12	9	6	17	6	6	18	9	20	14	5
22	15	11	5	6	12	4	6	50	10	23	14	3
23	25	8	4	6	10	4	7	8	7	20	4	5
24	17	5	3	6	6	2	4	13	2	21	3	4
25	8	14	4	33	9	3	4	15	18	10	4	4
26	9	18	5	19	5	14	5	14	34	5	9	138
27	5	10	4	11	6	14	5	5	31	6	26	35
28	3	5	4	10	5	8	9	3	15	5	20	15
29	2	11	26	4	27	5	12	29	15	6	34	15
30	6	6	22	5	14	2	9	36	11	9		12
31		4		5	6		19		7	29		10
MEAN	16	13	11	12	10	10	12	18	12	13	16	22

GEOMAGNETIC ACTIVITY INDICES



GEOMAGNETIC ACTIVITY INDICES

Hourly Equatorial Dst



Note the changes in sensitivity as well as the changing 0 reference level.

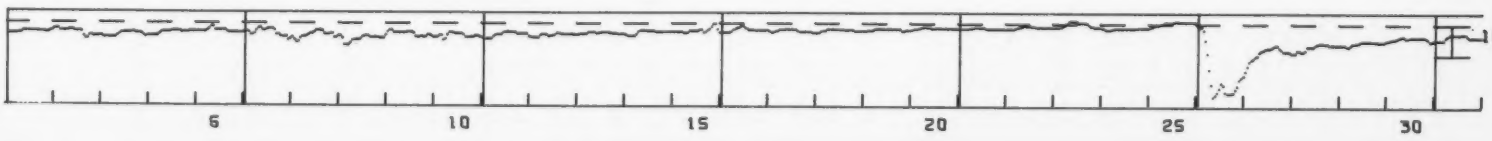
HOURLY EQUATORIAL Dst VALUES (PROVISIONAL)

MARCH 1976

NASA/GODDARD SPACE FLIGHT CENTER

(Time-UT) (Units-Gammas)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	-40	-39	-40	-40	-39	-36	-35	-32	-28	-31	-27	-31	-33	-29	-33	-31	-32	-35	-33	-33	-37	-34	-27	-25
2	-20	-19	-22	-30	-29	-30	-30	-26	-22	-28	-30	-32	-28	-26	-34	-48	-54	-49	-40	-38	-47	-47	-44	-40
3	-42	-50	-45	-46	-46	-49	-47	-47	-40	-35	-31	-31	-30	-31	-30	-31	-28	-36	-38	-35	-39	-44	-48	-41
4	-44	-43	-43	-43	-41	-35	-29	-27	-30	-34	-28	-25	-24	-25	-27	-30	-34	-28	-30	-30	-26	-26	-28	-26
5	-26	-27	-28	-30	-27	-23	-19	-11	-17	-28	-24	-23	-23	-21	-26	-32	-35	-32	-33	-35	-33	-36	-36	-30
6	-28	-25	-34	-42	-38	-32	-23	-16	-15	-28	-24	-20	-18	-18	-22	-28	-41	-42	-46	-48	-47	-48	-57	-49
7	-44	-56	-63	-58	-48	-43	-45	-41	-37	-32	-33	-29	-23	-24	-25	-31	-39	-41	-38	-33	-35	-51	-47	-40
8	-41	-53	-72	-72	-74	-63	-54	-52	-51	-54	-50	-44	-40	-39	-44	-49	-49	-47	-45	-49	-52	-53	-49	-37
9	-28	-22	-23	-33	-35	-31	-34	-34	-32	-33	-28	-32	-33	-37	-45	-49	-42	-41	-48	-43	-37	-37	-45	-49
10	-49	-43	-39	-42	-57	-49	-36	-29	-29	-35	-38	-37	-32	-32	-42	-49	-48	-49	-43	-45	-39	-39	-46	-50
11	-53	-54	-53	-51	-49	-43	-37	-34	-34	-36	-29	-27	-27	-31	-32	-31	-32	-38	-38	-37	-36	-38	-39	-46
12	-48	-50	-49	-50	-48	-38	-34	-34	-41	-46	-39	-38	-36	-31	-35	-38	-40	-40	-39	-37	-34	-34	-41	-40
13	-37	-32	-32	-33	-32	-27	-29	-28	-30	-36	-34	-29	-28	-29	-33	-34	-36	-37	-34	-38	-39	-34	-33	-35
14	-42	-45	-44	-41	-42	-34	-26	-22	-21	-29	-29	-29	-28	-28	-31	-32	-32	-29	-32	-31	-31	-30	-29	-31
15	-32	-29	-31	-28	-31	-35	-33	-29	-24	-30	-29	-24	-23	-20	-26	-32	-27	-22	-18	-11	-2	-5	-24	-33
16	-29	-29	-32	-32	-30	-25	-20	-18	-15	-13	-9	-9	-19	-23	-27	-25	-26	-28	-28	-25	-28	-27	-27	-26
17	-31	-33	-30	-25	-23	-20	-21	-20	-19	-24	-22	-21	-24	-23	-29	-32	-32	-30	-31	-32	-32	-33	-36	-34
18	-29	-29	-25	-23	-23	-19	-18	-19	-21	-25	-23	-22	-21	-21	-26	-26	-26	-25	-26	-30	-27	-28	-28	-24
19	-24	-24	-22	-22	-23	-19	-17	-18	-18	-21	-19	-19	-19	-20	-20	-19	-21	-21	-25	-30	-26	-21	-21	-22
20	-20	-18	-18	-16	-15	-13	-11	-12	-12	-18	-21	-15	-14	-17	-19	-19	-19	-18	-18	-18	-19	-19	-19	-20
21	-19	-17	-19	-19	-19	-15	-14	-12	-11	-14	-13	-16	-17	-20	-22	-18	-18	-17	-17	-19	-19	-18	-19	-20
22	-20	-20	-20	-19	-15	-12	-11	-9	-6	-10	-13	-12	-10	-13	-15	-17	-16	-13	-13	-12	-11	-14	-14	-16
23	-13	-11	-11	-10	-7	-4	0	6	9	6	4	3	-2	-1	1	2	-4	-9	-14	-14	-17	-16	-18	-17
24	-19	-22	-24	-24	-23	-17	-15	-14	-15	-18	-18	-17	-16	-16	-15	-18	-14	-14	-13	-14	-13	-13	-14	-13
25	-10	-8	-6	-4	-3	-2	0	4	5	2	4	4	6	7	5	5	5	4	5	6	5	0	3	-1
26	-11	-16	-15	-23	-56	-96	-144	-191	-229	-219	-211	-197	-181	-192	-214	-218	-217	-212	-210	-200	-192	-170	-164	-159
27	-144	-128	-114	-108	-104	-99	-96	-88	-81	-79	-75	-74	-76	-71	-68	-65	-68	-77	-83	-89	-86	-86	-91	-95
28	-93	-91	-81	-83	-96	-98	-80	-69	-68	-71	-68	-64	-61	-58	-63	-62	-63	-66	-69	-67	-66	-68	-69	-68
29	-65	-64	-65	-72	-75	-65	-58	-61	-57	-57	-53	-51	-52	-52	-54	-53	-57	-56	-57	-60	-59	-58	-56	-52
30	-49	-48	-46	-45	-44	-42	-39	-37	-36	-46	-42	-40	-39	-44	-43	-40	-40	-38	-40	-46	-51	-57	-55	-49
31	-48	-51	-51	-49	-47	-39	-35	-31	-31	-32	-33	-32	-31	-30	-31	-36	-42	-46	-44	-41	-41	-42	-43	-46



123
Mar 76

PRINCIPAL MAGNETIC STORMS

MARCH 1976

OBS. 2 letter IAGA code	GEOMAG-NETIC LATI-TUDE	COMMENCEMENT DAY	hr min (UT)	TYPE	SC - AMPLITUDES D(')	H(γ)	Z(γ)	MAXIMUM 3 HOUR - INDEX K DAY(3 HOUR PERIOD)	K	RANGES D(')	H(γ)	Z(γ)	UT END DAY	HOUR
CO	64.6N	2	04--	..	..	..	..	02(5)	7	124	1480	610	04	03
WI	54.2N	2	12--	..	..	..	..	02(7,8)	6	25	170	60	04	04
IR	41.0N	2	02--	..	..	..	..	02(5,6,7,8) 03(5,6,7)	5	17	113	22	05	02
HO	07.6N	2	0300	..	..	..	..	02(6)	5	3	91	13	03	23
HR	33.7S	2	17--	..	..	..	..	02(6,7)	5	10	69	63	02	22
GN	43.2S	2	03--	..	..	..	..	03(5,6)	5	19	80	110	04	04
HR	33.7S	3	17--	..	..	..	..	03(7)	5	15	58	79	03	23
CO	64.6N	5	06--	..	..	..	..	12(4)	7	188	1710	1050	12	19
FR	49.6N	5	21--	..	..	..	..	08(2)	6	29	125	53	13	09
IR	41.0N	5	04--	..	..	..	..	06(5,6) 07(4) 08(1,3,4,5)	5	22	141	43	09	07
TU	40.4N	5	21--	..	..	..	..	09(8)	6	17	115	35	12	16
HR	33.7S	5	21--	..	..	..	..	05(8)	5	12	32	34	05	24
SI	60.0N	6	14--	..	..	..	..	08(2)	7	80	930	600	12	16
NE	55.1N	6	1340	..	..	..	..	08(2,3)	6	48	170	282	14	08
WI	54.2N	6	17--	..	..	..	..	06(5,7,8) 09(7) 10(8)	6	33	190	80	11	03
HO	21.1N	6	14--	..	..	..	..	08(1)	5	7	104	29	06	16
HO	07.6N	6	0250	..	..	..	..	06(6) 07(6)	5	3	92	16	08	18
PM	18.7S	6	13--	..	..	..	..	08(4,5) 12(4)	5	8	90	70	12	16
HR	33.7S	6	15--	..	..	..	..	06(6,7,8)	5	20	71	86	06	24
GN	43.2S	6	14--	..	..	..	..	08(5)	6	19	90	110	06	14
TO	40.7S	6	1429	SC	+ 1.3	+	-	06(5,6,8) 07(6) 08(1,3,4,5)	5	13	180	50	08	15
BD	48.9N	7	00--	..	..	..	..	08(3)	6	36	116	69	14	16
GU	40.0N	8	0005	..	..	..	..	08(1)	5	3	110	20	10	06
AP	16.0S	8	0112	..	..	..	..	08(3)	5	4	113	30	12	07
HR	33.7S	8	07--	..	..	..	..	08(3)	5	6	43	15	08	09
IR	41.0N	9	08--	..	..	..	..	09(5)	6	24	124	43	12	20
HO	07.6N	9	0200	..	..	..	..	09(6)	5	2	94	11	10	24
MU	00.6S	9	0210	..	..	..	..	10(8)	5	5	178	22	12	06
HR	33.7S	9	12--	..	..	..	..	09(7,8)	5	15	100	63	09	24
GN	43.2S	9	02--	..	..	..	..	09(6) 12(4)	6	22	110	110	12	18
HR	33.7S	10	13--	..	..	..	..	10(8)	5	13	94	60	10	24
HO	07.6N	15	0200	..	..	..	..	15(6,8) 16(6,7)	4	4	86	33	16	20
NE	55.1N	25	1857	..	..	..	..	26(3,4)	9	199	1726	804	29	12
WI	54.2N	25	2359	SC	- 1 *	+ 9 *	0	26(6)	8	45	350	330	27	03
FR	49.6N	25	2051	SC*	+01	-15	-01	26(3)	8	55	470	520	29	09
TU	40.4N	25	19--	..	..	..	..	26(2,3,4,5) 27(1)	6	32	245	60	28	10
HO	21.1N	25	18--	..	..	..	..	26(2)	7	8	330	53	29	--
AL	09.5N	25	14--	..	..	..	..	26(3,5)	7	5	385	56	26	21
HO	07.6N	25	1300	..	..	..	..	26(4,5)	9	7	390	34	27	20
AN	01.5N	25	14--	..	..	..	..	--	-	5	379	107	26	21
TV	01.1S	25	14--	..	..	..	..	--	-	4	439	283	26	21
AP	16.0S	25	1308	..	..	..	..	26(2,3,4)	7	6	240	64	28	09
PM	18.7S	25	23--	..	..	..	..	26(3)	7	10	370	110	29	12
HR	33.7S	25	2340	SC*	- 1	-10	- 7	26(3,5,7)	6	48	306	233	27	03
TO	46.7S	25	21--	..	..	..	..	26(3,4,5,6)	7	62	270	380	27	09
KG	56.5S	25	23--	..	..	..	..	26(7)	9	--	--	--	28	03
CO	64.6N	26	0231	SC*	- 7	+32	- 8	26(5)	9	769	2630	1940	27	15
SI	60.0N	26	0233	SC*	+ 4.1*	-40.4*	-11.9*	26(6)	9	--	--	--	28	07
BD	48.9N	26	02--	..	..	..	..	26(3)	7	72	310	316	28	11
IR	41.0N	26	01--	..	..	..	..	26(5,6)	7	44	252	110	28	20
GU	40.0N	26	0231	SC*	..	-25	06	26(3)	7	10	390	50	28	01
SJ	29.9N	26	0232	SC	..	12	02	26(2)	6	13	209	50	27	07
MU	00.6S	26	0100	..	..	..	..	26(3,6)	7	16	314	53	28	07
GN	43.2S	26	01--	..	..	..	..	26(5,7)	7	42	230	330	29	09
NE	55.1N	31	2307	..	..	..	..	01(2,3,4)	9	159	1903	1509	02	09

SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

MARCH 1976

PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS (by Dr. A. Romana)

The meaning of the station symbols is given in the IAGA-Bulletins nr. 12 and 32. Times of ssc are mean values.

Sudden commencements followed by a magnetic storm or a period of storminess (ssc)

26 0233 B: WI VI HB CI TL LM; C: NI (si: A: SO - bp: A: KG)

Solar-flare effects (sfe)

Effects confirmed by ionospheric or solar observations are underlined.

05 0612 - 0623 LG
23 0844 - 0925 AQ SS
24 0014 - .... SS

Very unusual events: si, b, bs, bp, bps, ...

n o n e

Very unusual events: pi1, pi2, pc1, ..., pc6, pg

01 1116 - 1150 pi1 MT (A) RR period: 21 X 1.76; Y 2.50; Z 0.57
27 1009 - 1333 pc3 WN (A) RR period: 30; max. ampl.: 4nT

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

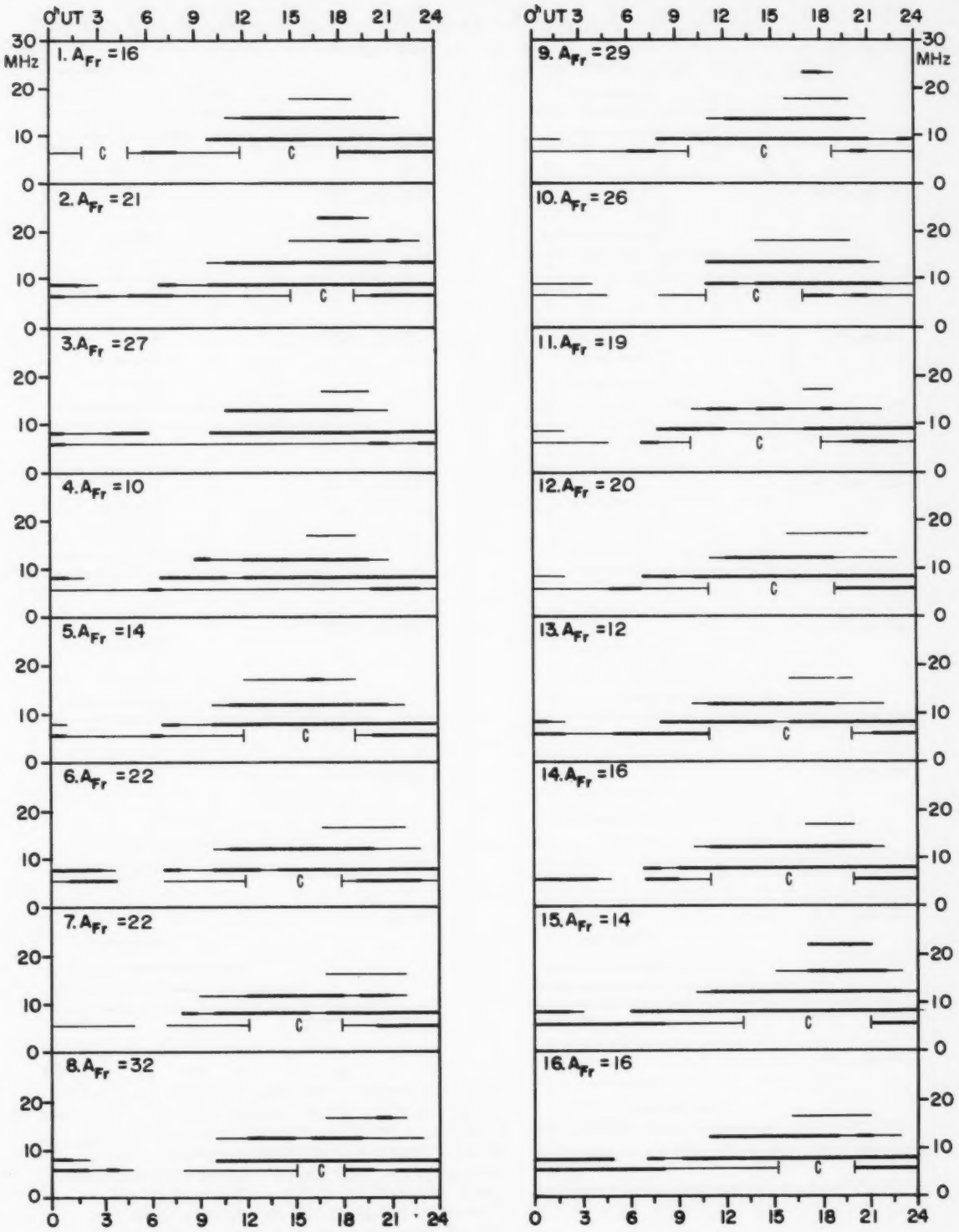
MARCH 1976

North Atlantic

MAR 1976	WHOLE DAY INDICES NORTH ATLANTIC	ADVANCE FORECASTS (JC-REPORTS) FOR WHOLE DAY	NORTH ATLANTIC 6-HOURLY QUALITY FIGURES 00 TO 06	06 TO 12	12 TO 18	18 TO 24	NORTH ATLANTIC SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF 02	08	14	20	GEOMAGNETIC INDICES K_{FR} HALF DAY (1)	(2)	A_{FR} OBSERVED
01	5-	5	4o	3+	6-	5+	4	4	5	5	3	3	16
02	5o	6	5o	4o	6-	5o	5	4	5	5	3	(4)	21
03	5o	6	5o	4+	5+	5o	4	4	5	5	(4)	(4)	27
04	5o	5	5+	4+	5o	5+	5	4	5	5	3	2	10
05	5+	5	5+	4+	5+	6-	5	5	6	6	3	2	14
06	6-	5	5+	5o	6-	6-	5	4	5	5	3	(4)	22
07	5+	5	5-	6-	6-	5+	5	4	5	5	(4)	(4)	22
08	5-	5	5o	3+	5-	5+	5	4	5	5	(5)	3	32
09	5-	5	5+	4+	5-	5o	4	4	5	5	(4)	(4)	29
10	5-	5	5o	4+	5-	5+	4	4	5	5	(4)	(4)	26
11	5-	5	5-	4o	5-	5+	4	4	5	5	3	3	19
12	4+	5	4+	4+	4+	5-	5	4	4	5	(4)	3	20
13	5+	5	4+	5o	6-	6-	5	5	5	5	3	2	12
14	5+	5	5o	5o	6-	6o	5	5	5	5	(4)	2	16
15	6-	5	6o	5o	6-	6o	5	5	5	5	3	3	14
16	6-	5	6o	6-	5+	5+	5	5	5	5	3	3	16
17	5+	5	5o	6-	6-	5+	5	5	5	6	3	3	15
18	5+	5	5o	6-	5+	5+	5	5	5	6	3	3	14
19	6-	5	5o	6-	6o	6-	6	6	5	6	3	2	11
20	6-	6	6-	6-	6+	6-	5	5	6	6	3	2	8
21	6-	6	5o	6-	6o	6-	6	5	6	6	1	2	4
22	6+	6	6-	5+	7o	7-	6	5	6	6	1	1	2
23	6o	6	6o	5+	7o	6o	6	5	6	6	1	2	3
24	6+	6	6-	6o	7-	6+	6	6	6	6	1	1	3
25	6+	6	6+	6o	7-	6o	6	6	6	6	1	2	5
26	4o	5	6o	3+	3-	4+	5	4	5	3	(6)	(5)	90
27	4+	5	4o	4+	5o	5o	3	3	4	4	(4)	3	27
28	5o	5	5o	4o	6-	5+	5	5	5	5	3	2	13
29	5o	5	5+	4-	6-	5+	4	4	5	5	(4)	1	19
30	6-	5	6-	5o	6+	5+	5	5	6	6	2	3	9
31	6-	6	6-	6-	6-	5o	5	5	5	6	2	1	6

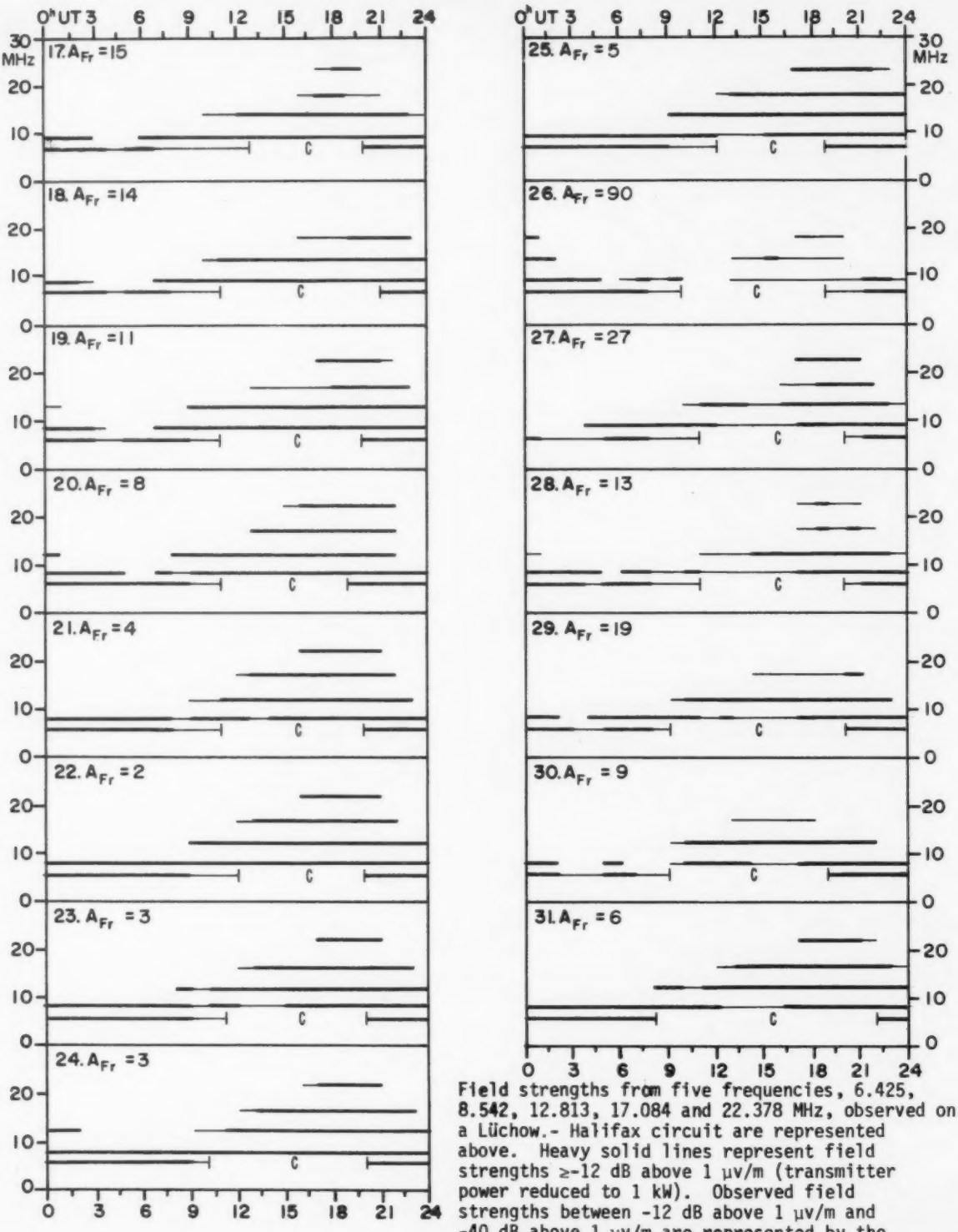
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

MARCH 1976



TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

MARCH 1976



Field strengths from five frequencies, 6.425, 8.542, 12.813, 17.084 and 22.378 MHz, observed on a Lüchow.- Halifax circuit are represented above. Heavy solid lines represent field strengths ≥-12 dB above 1 μv/m (transmitter power reduced to 1 kW). Observed field strengths between -12 dB above 1 μv/m and -40 dB above 1 μv/m are represented by the fine line. Adapted from Observations by Deutsche Bundespost

ESCOM - IEL

RADIO PROPAGATION QUALITY INDICES

MARCH 1976

Quality Indices calculated for reception at Lüchow

	TOKYO	HALIFAX	MOSCOW	CANBERRA	BRACKNELL
1	4.3	5.1	12.5	3.9	13.7
2	4.0	5.6	12.4	3.6	13.3
3	3.8	4.5	11.4	3.7	12.6
4	4.1	4.9	11.8	3.7	13.1
5	3.8	4.9	11.8	3.6	13.3
6	3.5	4.3	11.6	3.6	13.4
7	3.3	4.7	12.0	3.9	13.1
8	3.3	3.6	9.9	3.8	13.2
9	4.2	4.4	11.9	4.4	12.9
10	4.1	3.6	10.8	3.7	12.1
11	3.8	4.0	10.3	3.4	11.2
12	4.2	4.7	11.3	3.8	12.4
13	4.0	5.0	13.0	4.2	13.0
14	4.5	5.9	12.3	4.2	12.6
15	4.1	6.3	13.2	4.6	13.7
16	4.3	5.5	12.8	3.7	13.3
17	4.0	6.0	12.4	4.3	13.0
18	4.2	7.0	12.7	4.2	13.1
19	4.8	7.9	13.3	4.1	13.9
20	5.6	8.3	13.7	5.1	13.7
21	5.8	8.6	13.9	5.2	13.1
22	5.7	9.0	13.1	4.6	13.4
23	6.2	8.9	12.9	5.3	13.2
24	6.4	9.0	13.2	5.9	13.1
25	6.2	8.3	13.1	6.1	13.8
26	4.1	3.5	12.1	4.3	12.1
27	4.9	5.5	12.7	4.0	13.5
28	3.0	4.8	11.2	4.4	12.4
29	2.8	6.3	11.9	4.4	12.5
30	5.4	6.3	12.9	4.6	13.2
31	4.6	6.1	13.1	5.2	13.7
MEAN	4.4	5.9	12.3	4.3	13.1

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AMERICAN REVOLUTION BICENTENNIAL
1776-1976